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ABSTRACT

The Interchange newsletter is prepared semiannually by the staff of Access ERIC in order to communicate matters of interest to users of the ERIC database and of other ERIC products and services. The newsletter disseminates a broad spectrum of information pertaining to ERIC, including: price changes, microfiche products, ERIC Clearinghouse news, search strategies, education-related databases, referral information, national-level educational studies, microcomputer news related or extendable to ERIC, new ERIC data elements, lexicographic news, user survey data, new publications and products, etc. (WTB)

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Office of Educational Research and Improvement
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ERIC USERS' INTERCHANGE

February 1988 - March 1993

(8 issues)

A semiannual newsletter for users of the ERIC database

IR054431

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UNITED STATES DEPARTMENT OF EDUCATION

OFFICE OF THE ASSISTANT SECRETARY
FOR EDUCATIONAL RESEARCH AND IMPROVEMENT

February 10, 1988

Dear Interchange Reader:

A copy of the most recent issue of ERIC Users Interchange is enclosed. We have also included, for your information, the Department of Education press release announcing the results of the ERIC Clearinghouse competition. Some of the information in Interchange, such as the contractors and locations of the 16 ERIC Clearinghouses, is superseded by the more recent information contained in the press release.

Due to a drastically reduced printing budget for Fiscal Year 1988, only the first 15 pages -- the "news" section -- of Interchange are provided in printed copy. However, for those of you who are interested in all or some of the attachments, the entire issue of Interchange -- including the attachments -- is contained on the enclosed microfiche.

Despite this slight inconvenience, I hope you find this issue of Interchange useful in bringing you up to date on the many changes (and improvements) in ERIC.

Sincerely,

Robert M. Stonehill

Robert M. Stonehill
Director
Educational Resources Information Center

WASHINGTON, D.C. 20208

UNITED STATES
DEPARTMENT OF EDUCATION NEWS

FOR RELEASE
Friday, February 5, 1988

Jane Glickman (202) 732-4576
Mitch Pearlstein (202) 357-6560

CONTRACTS AWARDED FOR 16 ERIC CLEARINGHOUSES

The U.S. Department of Education today announced the award of nearly $5 million to operate the 16 clearinghouses of the Educational Resources Information Center (ERIC) system.

The funds are for the first year of contracts that are expected to run for five years.

The clearinghouses are major components of the 21-year-old ERIC system, which is the world's largest source of education information and now contains over 650,000 documents on education research, practice and statistics. Each clearinghouse is responsible for collecting and distilling current and comprehensive information about a particular subject area, and for making the information easily accessible to educators, scholars, policymakers, journalists, parents and the general public.

Each of the winning proposals in the clearinghouse competition ranked highest in quality as well as lowest in cost. Three of the winners are new contractors: Indiana University will operate the Clearinghouse on Reading and Communication Skills; the Appalachia Educational Laboratory will manage the Clearinghouse on Rural Education and Small Schools; and the American Institutes for Research will direct the Clearinghouse on Tests, Measurement and Evaluation.

The clearinghouse awards mark the first of several contract competitions aimed at improving and expanding the services that ERIC offers.

-MORE-

Two new components of the ERIC system will be competed later this year. ACCESS ERIC will coordinate outreach, product development and dissemination to make it easier for diverse audiences of potential users to get information from ERIC. Smaller units called Adjunct Clearinghouses will acquire documents and articles in specific fields to supplement information collected by the 16 clearinghouses. The contract to operate the existing ERIC Facility -- which builds and maintains the extensive ERIC database -- will also be recompeted this year.

"Our intention," said Assistant Secretary Chester E. Finn, Jr., whose Office of Educational Research and Improvement oversees the ERIC system, "is to revitalize the system to make it more useful to parents, educators, students and administrators seeking to improve education in their communities. The awards we have just made for the clearinghouses are an important step in the Department's efforts to expand and strengthen ERIC services."

Information in the ERIC system is made available to the public in several ways: microfiche collections are maintained at hundreds of libraries across the nation, the actual documents are available as reference materials at these libraries or can be ordered from a central distribution service, and the information is also accessible to personal computer users who can directly enter the database through commercial systems.

###

NOTE TO EDITORS: Attached is a list of the 16 clearinghouse winners with their subject areas and award amounts.

AWARDS FOR ERIC CLEARINGHOUSES

Recipient	Subject Area	Amount
CALIFORNIA		
University of California at Los Angeles Contact: Dr. Arthur M. Cohen (213) 825-3931	Junior Colleges	$262,439
DISTRICT OF COLUMBIA		
George Washington University Contact: Dr. Jonathan D. Fife (202) 296-2597	Higher Education	$371,038
Center for Applied Linguistics Contact: Dr. Charles W. Stansfield, (202) 429-9551	Languages and Linguistics	$285,260
American Institutes for Research Contact: Dr. Lawrence M. Rudner, (202) 342-5140	Tests, Measurement, and Evaluation	$269,959
American Association of Colleges for Teacher Education Contact: Dr. Mary Dilworth (202) 293-2450	Teacher Education	$293,919
INDIANA		
Indiana University, Bloomington Contact: Dr. Carl B. Smith (812) 335-7167	Reading and Communication Skills	$351,062
Indiana University, Bloomington Contact: Dr. John Patrick (812) 335-3838	Social Studies/ Social Science Education	$341,443
ILLINOIS		
University of Illinois, Urbana Contact: Dr. Lilian G. Katz (217) 333-1386	Elementary and Early Childhood Education	$286,218

-MORE-

Recipient	Subject Area	Amount
MICHIGAN University of Michigan, Ann Arbor Contact: Dr. Garry R. Walz (313) 764-9492	Counseling and Personnel Services	$266,640
NEW YORK Syracuse University Contact: Dr. Donald P. Ely (315) 423-3640	Information Resources	$298,283
Teachers College, Columbia University, New York Contact: Dr. Erwin Flaxman (212) 678-3433	Urban Education	$262,619
OHIO Ohio State University, Columbus Contact: Dr. Susan Imel (614) 486-3655 or (800) 848-4815	Adult, Career, and Vocational Education	$363,952
Ohio State University, Columbus Contact: Dr. Robert W. Howe (614) 292-6717	Science, Mathematics, and Environmental Education	$315,255
OREGON University of Oregon, Eugene Contact: Dr. Philip K. Piele (503) 686-5043	Educational Management	$265,774
VIRGINIA Council for Exceptional Children, Reston Contact: Dr. Donald K. Erickson (703) 620-3660	Handicapped and Gifted Children	$461,161*
WEST VIRGINIA Appalachia Educational Laboratory, Charleston Contact: Dr. C. Todd Strohmenger (304) 347-0400	Rural Education and Small Schools	$269,196
Total for 16 clearinghouses:		$4,964,218

* Includes $155,132 provided by the Office of Special Education and Rehabilitative Services for additional work.

ISSN 0738-7784.

ERIC USERS INTERCHANGE

NOVEMBER 1987

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Interchange is prepared by the staff of the ERIC Processing and Reference Facility, 4350 East-West Highway, Suite 1100, Bethesda, Maryland 20814, which is operated on contract by ORI, Inc., Information Systems, for the U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy. All questions, correspondence, and contributions should be directed to the Editor, *Interchange*, at the above address, or by telephone (301) 656-9723.

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Attachment 87-13: **RIE "Special Announcements" — A Selection from the Past Few Years**

I. *INTERCHANGE* Is Back!

The ERIC system newsletter *Interchange* was originally established as a mechanism for reaching the many subscribers to the ERIC magnetic tapes. Its first issue was dated November 1972. As the online subscribers began to supplant the tape subscribers, the focus of *Interchange* changed to encompass any and all users of the ERIC database or its by-product publications. *Interchange* ran for ten years and 24 issues (see ED-233 745 below), and its mailing list grew steadily until it reached approximately 1800 recipients. In 1983, however, with the issue of July 1983, the publication of *Interchange* was brought to a temporary halt.

ED 233 745 IR 050 515
Brandhorst, Ted, Ed.
Interchange. November 1972-July 1983.
ERIC Processing and Reference Facility, Bethesda, Md.
Spons Agency—Educational Resources Information Center (ED/NIE), Washington, DC.
Pub Date—83
Contract—400-81-0003
Note—628p.; Includes 24 issues, published irregularly across the past decade (November 1972-July 1983). Title surrounded graphically by the phrase "ERIC Database Users" (1972-79) or "ERIC Users" (1980-83).
Pub Type— Collected Works - Serials (022) — Information Analyses - ERIC Information Analysis Products (071) — Reference Materials (130)
EDRS Price - MF03/PC26 Plus Postage.
Descriptors—*Databases, Information Dissemination, Information Retrieval, *Information Services, Information Systems, Microfiche, Newsletters, Search Strategies
Identifiers—*ERIC

The Interchange newsletter is prepared irregularly (approximately semiannually) by the staff of the ERIC Processing and Reference Facility in order to communicate matters of interest to users of the ERIC database and of other ERIC products and services. Initially, the focus was on computer-oriented users who were receiving the ERIC magnetic tapes and on problems associated with utilizing the ERIC bibliographic database in machine-readable form. In later years, the focus shifted to ERIC users in general, and the newsletter began to disseminate a broad spectrum of information pertaining to ERIC, including: price changes, microfiche products, ERIC Clearinghouse news, search strategies, manual searching, education-related databases, referral information, national-level educational studies, microcomputer news related or extendable to ERIC, new ERIC data elements, lexicographic news, etc. Current major categories for newsletter announcements are: General User Information; Product News; Computer Searching; and Microcomputers. This package consists of the first 24 issues of Interchange, extending from November 1972 through July 1983 (a period of just over 10 years). (WTB)

Now, after a hiatus, *Interchange* is back! The ERIC Redesign effort has renewed interest in reaching the end user and in all aspects of outreach and ease of access. As a result, *Interchange* is being re-activated and its mailing list updated.

Interchange's Phoenix-like revival imposes two items of administrative business:

1. **Mailing List Maintenance**

   With a four-year old mailing list in hand, we need to make sure that you still want to receive *Interchange* and that we have your correct address. A form is enclosed that we request you complete and return to us so that we can bring *Interchange's* mailing list up-to-date.

2. **Invitation/Request to Submit Articles, News Items, and Ideas for *Interchange***

   Some of you used to contribute to *Interchange*. We want to start that process up again. Also, we have so much catching up to do that we would like to hear from you concerning your questions and requests for information. We will do our best to fill *Interchange* with interesting material relevant to accessing ERIC, but if there is anything special you would like to see, please let us know.

II. New Summaries of the Recent Past and Major Projected System Developments

ERIC Write-ups in *Bowker Annual* and *ALA Yearbook* Summarize Major Developments of Recent Past

The library and information science profession is fortunate to have several publications that attempt to summarize the major developments in the field for a given calendar year. ERIC is sometimes asked to contribute to these publications. The *ALA Yearbook* regularly asks the ERIC Clearinghouse on Information Resources (IR), at Syracuse University, to contribute an article on ERIC. The *Bowker Annual of Library and Book Trade Information* generally asks the ERIC Processing and Reference Facility to contribute an article on ERIC every two years. ERIC is represented in both these reference tools in the volumes covering calendar 1986. Together, these two reports provide an excellent idea of important accomplishments and developments within the ERIC system during the recent past; they are reproduced here as Attachment 87-1 (A-B).

ERIC Redesign and the New ERIC System

During 1986, the Office of Educational Research and Improvement (OERI) of the U.S. Department of Education conducted an extensive examination of the ERIC system.

This examination is described in summary form as part of Attachment 87-1A. During the course of this study, hundreds of letters were received from ERIC users in the field, providing OERI with feedback on various discussion papers and planning documents that had been issued earlier (see ED-278 429 below). On July 30, 1987, the Subcommittee on Select Education of the U.S. House of Representatives held oversight hearings on ERIC. The testimony heard at these hearings and the views expressed at that time by the Congressmen on the subcommittee provided additional input to the OERI planners.

As a result of these studies, deliberations, and Congressional reactions, OERI announced on August 6, 1987, in a communication from the Director of Information Services (IS), that:

"As a result of an extensive redesign study conducted by the Office of Educational Research and Improvement, we are proposing to establish sixteen clearinghouses and three new components: ACCESS ERIC, Adjunct clearinghouses, and ERIC Partners. ACCESS ERIC will provide system-wide coordination, training, materials development, and outreach awareness activities designed to make ERIC services and products accessible and useful to a greatly expanded audience. Adjunct clearinghouses will be establish to enhance ERIC coverage and dissemination of documents and materials on topics not adequately treated under the current configuration, such as art and music, private education, and education policy. ERIC Partners will be organizations and institutions that will actively and widely distribute and advertise ERIC materials or services."

The most significant change from earlier plans was in the decision to retain the sixteen basic Clearinghouses with their now-familiar names. Earlier plans had proposed various mergers and name changes. The feedback from the field and the Congressional reactions were overwhelmingly in favor of not disrupting the existing ERIC Clearinghouse structure.

Also issued with the letter of August 6 was a "Fact Sheet" (see Attachment 87-2) that describes the "new ERIC" and the three to-be-added components:

ACCESS ERIC

A new outreach arm of ERIC that will function in the heretofore neglected areas of: marketing, advertising, publicity, public awareness, ease of access, training of users/searchers, dissemination of information about ERIC, development of system-wide products that combine or cut across the interests of all or many Clearinghouses. ACCESS ERIC would also attempt to tap various possible sources of income/royalties that might permit it over time to become self-supporting.

Adjunct Clearinghouses

Adjunct Clearinghouses would receive seed money to establish new "junior" Clearinghouses in subject areas not highly visible in the current Clearinghouse structure, e.g., art and music, private education, humanities, etc. Adjunct Clearinghouses would acquire documents and journal articles in their subject areas and would "assist" in processing this material for the ERIC database. The exact details of

ED 278 429 **IR 051 933**
Bencivenga, James J. And Others
ERIC Redesign. Papers Issued for Public Comment. 1986-1987.
Educational Resources Information Center (ED), Washington, DC.; Office of Educational Research and Improvement (ED), Washington, DC.
Pub Date—Apr 87
Note—60p.
Pub Type— Reports - Evaluative (142)
EDRS Price - MF01/PC03 Plus Postage.
Descriptors—*Information Dissemination, *Information Needs, Information Networks, Information Services, Information Systems, Information Utilization, *Needs Assessment, Position Papers, Systems Analysis
Identifiers—*ERIC

This compilation consists of various letters and documents issued for public comment during 1986-1987 by the Office of Educational Research and Improvement (OERI) of the U.S. Department of Education, during its examination of the Educational Resources Information Center (ERIC) system to determine any needed changes and improvements. This compilation includes only the material that was distributed for public comment. It does not include the minutes of meetings of advisory groups formed during 1986 to study ERIC, the background papers that were prepared to stimulate internal discussion, or the many letter reactions that were received from the field in response to these public announcements. The components of this package are: (1) "ERIC in Its Third Decade" (a statement of principles); (2) "Domains or Scope Areas to Be Included in the ERIC System"; and (3) "Summary of the Educational Resources Information Center (ERIC) Redesign" (an implementation paper). Appended to the third component are two position papers: (1) "Access ERIC" (including "ERIC Partners"), by John Collins; and (2) "Adjunct Clearinghouses," by Elizabeth Payer. Except insofar as they may be modified by further public comment or congressional action, it is OERI's intent to proceed to modify ERIC along the lines described in these documents. These changes involve: (1) Merging the Clearinghouses on Teacher Education and Counseling and Personnel Services into a "School Professionals" Clearinghouse; (2) Changing the names of seven Clearinghouses; (3) adding a Clearinghouse on "Education Statistics," to be located within the Center for Education Statistics (CES); (4) Initiating a new ERIC system component called "ACCESS ERIC" to concentrate on marketing, promotion, advertising, public relations, training, system-wide information analysis products, and liaison with other information systems; (5) Initiating a formal users' group to be called "ERIC Partners"; (6) Initiating a new kind of "Adjunct Clearinghouse" that will, at no cost to ERIC, acquire and process for ERIC the educational literature in the distinctive areas (e.g., art) in which their host organizations may have a special interest. (AA) how Adjunct Clearinghouses would participate in the various technical processes (i.e., cataloging, indexing, abstracting, duplicate checking, lexicography, etc.) associated with building the ERIC database have not yet been worked out. It is conceived that Adjunct Clearinghouses would exist in host organizations that would have a natural interest in their respective topical areas. It is also conceived that after the initial seed money Adjunct Clearinghouses would eventually be no-cost-to-the-Government operations.

ERIC Partners

ERIC Partners would be an association of users that would actively help to disseminate ERIC-developed materials and to identify documents or materials to be considered for the database. In return, they would be given advance information and perhaps preferential prices and other perquisites. ERIC Partners would not receive direct Federal funding, although they might receive special training.

ERICSTAT Project — Machine Readable Data Files (MRDF) to be Announced in RIE in 1988.

ERIC has launched a project to identify education-related data files (i.e., collections of statistical/numeric data in machine-readable form, usually on magnetic tape), to design a methodology for describing and characterizing the content of such files, to catalog/index/abstract such files (as adequate documentation is obtained), and to announce selected files routinely in ERIC's monthly abstract journal *Resources in Education* (RIE), beginning with the January 1988 issue.

A new Publication Type Code (102) has been developed in order to tag such data file resumes for future computerized retrieval.

This new type of accession is precedent-setting in that it is the first non-print media permitted into the ERIC database. There is no document necessarily behind a machine-readable data file (MRDF) resume. There may be associated printed documentation, but that is quite different from the file itself.

The original full "ERICSTAT" resumes will contain many fields not applicable to documents, e.g., "Variables", "Respondents". etc. These long descriptions must be truncated/shortened and "forced" into the standard RIE format. This will result in the loss of some information, e.g. complete listings of "variables". However, the ERICSTAT abstracts will be segmented and lengthened to compensate somewhat for this loss of separate fields.

Data file resumes, not representing documents, will not be in the ERIC microfiche collection and will not be available from EDRS. As with any such Level 3 accession, ERIC will cite in the resume exactly where the file can be obtained or consulted.

Attachment 87-3 is a sample ERIC resume for an education-related machine-readable data file (MRDF).

III. ERIC System Component Organizations — Bringing Users Up-to-Date on Names and Locations

Name Changes You Should Know

New	Old	Older
Center for Education Statistics (CES)	Center for Statistics (CS)	National Center for Education Statistics (NCES)
Office of Educational Research and Improvement (OERI)	*National Institute of Education (NIE)	National Center for Educational Research and Development (NCERD)

*NIE merged into OERI in October 1985

Location Changes of ERIC Components

Attachment 87-9 (#6) (ERIC Ready Reference #6) lists the locations of all the existing components of the ERIC system, as of November 1987. When one of these locations changes, it sometimes takes many months, even years, for the new information to circulate completely throughout the user community. Central ERIC, the ERIC Facility, and the ERIC Document Reproduction Service (EDRS) are all still receiving mail addressed to their prior locations.

The most recent physical location changes (i.e., since the last *Interchange*) in the ERIC system are highlighted below.

Special Note: Additional Clearinghouse changes, effective January 1, 1988, are announced in a press release enclosed with this issue.

Central ERIC	555 New Jersey Ave., N.W. Washington, DC 20208-1235
ERIC Processing and Reference Facility	4350 East-West Highway Suite 1100 Bethesda, MD 20814-4475
ERIC Document Reproduction Service (EDRS)	3900 Wheeler Avenue Alexandria, VA 22304-5110
ERIC Clearinghouse for Social Studies/Social Science Education	Indiana University 2805 East 10th Street Bloomington, IN 47405-2373
ERIC Clearinghouse on Educational Management	University of Oregon 1787 Agate Street Eugene, OR 97403-5207
ERIC Clearinghouse on Elementary and Early Childhood Education	University of Illinois 805 West Pennsylvania Ave. Urbana, IL 61801-4897
ERIC Clearinghouse on Languages and Linguistics	Center for Applied Linguistics 1118 22nd St., NW Washington, DC 20037-0037

The ERIC Technical Steering Committee — A Mechanism for Getting ERIC to Investigate Problems or to Consider Suggestions for Improvement

The ERIC Technical Steering Committee is an internal ERIC committee made up of representatives selected from the staff of the ERIC Clearinghouses, the ERIC Facility, and the other components of the ERIC system. A Central ERIC staff member attends all committee meetings and is liaison from the committee to Central ERIC. The committee is responsible for making recommendations concerning improvement of ERIC's technical processes and products and for advising Central ERIC on technical suggestions offered by any and all sources. Officially, the duties of the ERIC Technical Steering Committee are:

- Planning and implementing the agenda for ERIC's "National Technical Meeting".
- Providing planning assistance to local groups for any ERIC regional technical meetings.
- Considering all technical recommendations resulting from national/regional technical meetings, submitted by ERIC components, or received from outside sources and advising Central ERIC on such recommendations.
- Carrying out special projects on behalf of the ERIC network, as approved by Central ERIC.

Officially, the Technical Steering Committee is comprised of five people. At least three must be from ERIC Clearinghouses (one each from the East, Midwest, and West Coast groupings). One must be from the ERIC Facility. The Chair can be from any component and is selected by Central ERIC. A balance on the committee between processing and user services skills is desirable and is sought. Each member serves a three-year term (the Facility determines how long its representative serves). New representatives are generally recommended by existing committee members, but suggestions and volunteers may come from any component. All new members are approved by Central ERIC.

Examples of issues considered recently by the ERIC Technical Steering Committee are the following: acquisition procedures for Federal documents; policies for the ERIC Digest format; editing procedures for CIJE input; quality control over ERIC marketing brochures.

Users with suggestions for improvements in the nuts and bolts operation of the ERIC system are invited to funnel their comments through the ERIC Technical Steering Committee. The name and address of the current Chair is:

Lynn Barnett, *Chair*
ERIC Technical Steering Committee
ERIC Clearinghouse on Higher Education
George Washington University
One Dupont Circle, Suite 630
Washington, DC 20036
202-296-2597

ERIC Vocabulary Review Group (VRG)

The ERIC Vocabulary Review Group (VRG) is a group of approximately 25 individuals (19 internal, 6 external) that oversee all additions and changes made to the *Thesaurus of ERIC Descriptors*. The current membership of the VRG is listed below.

ERIC users encountering difficulties in subject searching, or wanting the addition of new vocabulary terms not now in the Thesaurus, are encouraged to contact the VRG. Inquiries may be directed to the ERIC Facility Lexicographer, or, if related to a specific subject area, to the appropriate Clearinghouse Vocabulary Coordinator.

ERIC Vocabulary Review Group — Current Membership

Clearinghouse Vocabulary Coordinators

CE	Sandra Kerka
CG	Nancy Beekman
CS	Michael Spooner
EA	Mary Lou Finne
EC	Judi Conrad
FL	Jeanne Rennie
HE	Lynn Barnett
IR	Barbara Minor
JC	Anita Colby (VRG Chair)
PS	Norma Howard
RC	Manuela Quezada-Aragon
SE	Stanley Helgeson
SO	Jane Henson
SP	Mary Tregillus
TM	Betsy Smith
UD	Wendy Schwartz

Central ERIC/Office of Educational Research and Improvement
Patricia Coulter

ERIC Processing and Reference Facility
Jim Houston (Lexicographer)
Carolyn Weller (Coordinator of Identifiers)

Oryx Press Representative
Vacant

User Representatives
Jo Ann Davison
Gilman School, Baltimore, MD

Sara Lake
San Mateo Educational Resources Center (SMERC)
Redwood City, CA

Suzanne Wise
Belk Library
Appalachian State University, Boone, NC

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Southampton
ENGLAND

Elizabeth Oley
Australian Education Index (AEI)
Australian Council for Educ. Research
Hawthorn, Victoria
AUSTRALIA

*InterEd is an international project among the major English-language educational databases (AEI, BEI, CEI, and ERIC) to cooperate in database building and vocabulary development.

IV. ERIC Products — Bringing Users Up-to-Date on Prices and Ordering Procedures

Resources in Education — Price Changes Announced by U.S. Government Printing Office (GPO)

The U.S. Government Printing Office has applied a new pricing formula to ERIC's abstract journal *Resources in Education (RIE)* and has informed ERIC that effective July 16, 1987 the new prices shown below apply. The price for an RIE annual subscription (12 issues) has been reduced 9%, from $56 to $51. However, the price for single issues of RIE has been increased 100% (i.e., doubled, from $8.50 to $17). Efforts by Central ERIC to appeal the 100% increase in single issue prices have been unsuccessful. The message is clear. Keep your RIE subscription up-to-date and don't miss any issues!

RIE	**Domestic**	**Foreign**
Annual Subscription (12 issues)	$51	$63.75
Single Issue	17	21.25

RIE Semiannual Index		
Annual Subscription (2 issues)	$20	$25.00
Single Issue	15	18.75

ORYX Press — *Current Index to Journals in Education* (CIJE) and Other ERIC-Related Products

In January 1987, Oryx Press published the 11th edition of the *Thesaurus of ERIC Descriptors*. The new edition, priced at $65, incorporates over 200 new terms added since the 10th edition of three years earlier. A flyer describing this product and how to order it is provided as Attachment 87-4A.

Current Index to Journals in Education (CIJE) priced at $175/year during 1986, was raised to $207/year in January 1987. Oryx does not plan any CIJE price changes during 1988. The latest Oryx brochure dealing with ERIC-related products is provided as Attachment 87-4B.

In summary:

Current Index to Journals in Education (CIJE)	$207/year
CIJE Semiannual Cumulations (Resumes and Indexes)	$198/year
CIJE Cumulated Author Index (1969-1984)	$140
Thesaurus of ERIC Descriptors (11th edition, 1987)	$65
Resources in Education (RIE) Annual Cumulations	
— Resumes	$207
— Indexes	$101

ERIC Document Reproduction Service (EDRS)

The ERIC Document Reproduction Service (EDRS) is the document delivery arm of ERIC. EDRS prepares microfiche for 98.5% of the documents announced in *Resources in Education* (RIE) and sells subscriptions to that microfiche (about 13,000 titles a year) to over 750 organizations around the world. EDRS also responds to on-demand orders for ERIC documents in either microfiche or reproduced paper copy form.

The following items should serve to bring you completely up-to-date about EDRS:

Present Location: 3900 Wheeler Avenue,
Alexandria, VA 22304-5110

Note:
EDRS moved a few years ago from Arlington, VA. Old issues of RIE, of course, still carry the old address. Users should be careful to use the new address because the Post Office is no longer forwarding from the old address.

Present Telephone Nos.: 703-823-0500
1-800-227-3742

Note:
The toll-free 800 number is a convenient new feature. Together with the credit card order feature, it permits you to order ERIC documents directly by telephone, quickly and with virtually no paperwork.

Present Prices: Microfiche: $.78 per title (on demand)
(i.e., 1-5 fiche=480 pages)
($.16 per additional fiche over 5)
Paper copy: $1.85 per 25 page increment

Note: EDRS prices, despite occasional increases, continue to be the lowest in the business. The increase of October 20, 1986 moved the on-demand price upward only 3 cents (from $.75 to $.78 per title), the on-demand paper copy price upward only 5 cents (from $1.80 to $1.85 per 25 page increment), and the Standing Order Microfiche Subscription price only 3 mils per fiche card (from $.079 to $.080 per fiche card).

The just-announced increase of October 30, 1987 moved the Standing Order Microfiche Subscription price only 4 mils (from $.080 to $.084 per fiche card) and the Backfile Collections price also 4 mils (from $.078 to $.082 per fiche card).

Late-breaking news is that a further price increase is currently in process. This increase will raise the cost of on-demand fiche from $.78 per title to at least $.82 per title; on-demand paper copy will go from $1.85 per 25-page increment to at least $1.94 per increment. The "EDRS Order Form" will not be revised until this in-process price increase is granted by the Government and finalized.

This somewhat complex price picture is summarized in the Table below.

EDRS Product Cost Table
(October 30, 1987)

	1986/1987 Production	**1986** Price Per Fiche	**1987** Price Per Fiche	**1988** Price Per Fiche
1. **Standing Order Collections**				
a. Silver Fiche Cards	511, 312	0.165	0.168	0.176
b. Vesicular/Diazo Fiche Cards	11,939,598	0.079	0.080	0.084
2. **ERIC Special Collections**	-0-	0.129	0.132	0.139
3. **Back Collections** (Cards) (1966 thru last full year)	3,661,405	0.075	0.078	0.082
4. **On-Demand Microfiche**	13,886 Titles 19,962 Fiche cards	0.75 (Per Title)	0.78 (Per Title)	0.82 (Per Title)
	1986/1987 Production	**1986** Price Per Increment	**1987** Price Per Increment	**1988** Price Per Increment
5. **On-Demand Paper Copy**	34,353 Titles 89,152 25-page increments 2,228,800 pages	1.80	1.85	1.94

Other Information

- **800 Number** - EDRS has added a toll-free national 800 number: 1-800-227-3742, for the convenience of those ordering by telephone
- **Credit Card Ordering Capability**
  EDRS now accepts telephone orders when charged to a VISA or Mastercard account.
- **New Order Form**
  A new order form (dated May 11, 1987) has been prepared to reflect the new address, 800 number, price changes, and credit card ordering option. (See Attachment 87-5A).
- **Special Products Brochure**
  EDRS offers a variety of cumulative indexes (e.g., Title, Author, Subject, Institution, Descriptor, Identifier) on microfiche. A new brochure (dated July 1987) details these inexpensive products. (See Attachment 87-5B).
- **ERIC Starter Kit**
  EDRS has put together a package that includes *all* their special products, a Micro Design microfiche reader, and various forms of customer support. This package is called the "ERIC Starter Kit" and is available for $389 (See Attachment 87-5C).

UMI Article Clearinghouse (Document Delivery Arm For ERIC/CIJE Journal Articles) Adds Publishers, Reduces Prices, and Increases Ordering Options

Most ERIC users are aware of the fact that the full text of documents announced in *Resources in Education* (RIE) is available in the ERIC microfiche collection and can be purchased (in paper or microfiche copy) from the ERIC Document Reproduction Service (EDRS). In other words, EDRS is the document delivery arm of ERIC when it comes to documents.

But how are users to acquire full text copies of the journal articles they retrieve from the ERIC database? Not all ERIC users are aware that University Microfilms International (UMI) operates a UMI Article Clearinghouse that is, in effect, ERIC's document delivery arm for journal articles.

Journal articles present a formidable document delivery problem. Each journal has its own publisher. Each journal is copyrighted by its publisher. In order to reproduce articles from journals legally, arrangements must be made with each publisher and royalties paid for each reproduction where required. Not all publishers are willing to make such an arrangement. It is a long, slow process getting publisher permissions.

Over the years, UMI has managed to make arrangements with the publishers of approximately 80% of the journals covered by CIJE. No other reprint vendor offers such a close-to-complete service for journal articles indexed by ERIC.

Three aspects of UMI's service are worth highlighting: (1) they are constantly adding new journals and seeking to increase the percentage of CIJE journals covered; (2) their prices per journal article have recently been reduced and now stand at a reasonable $5.50-$7.50 per article (any size article) for deposit account customers; (3) their ordering options have been increased to meet the needs of a growing population of clients (see UMI brochure, Attachment 87-6).

Users who need to acquire copies of journal articles found in ERIC, and who do not have easy access to the relevant journals via a close large research library, are advised to investigate the UMI service.

Together, EDRS and UMI provide document delivery services for 98% of the ERIC documents and 80% of the journal articles, respectively.

ERIC Database Available on CD-ROM Disc from Three Vendors (DIALOG, OCLC, SilverPlatter)

The CD-ROM optical laser disc seems to be *the* information product of the late 1980's. With each disc able to store over 500 million bytes of information, large databases can be shrunk to the size of a man's wallet and can be accessed on small, inexpensive stand-alone microcomputer systems. Database producers are rushing to offer their product on the new medium, mindful of the fact, however, that CD-ROM usage may well cut into existing online usage and thereby reduce established revenue channels.

ERIC was one of the first major files to be offered to the public in CD-ROM format. SilverPlatter shipped its first ERIC-on-CD-ROM subscription in August 1986. Some months later DIALOG announced its DIALOG OnDisc ERIC product. OCLC is the latest vendor to announce an ERIC CD-ROM product. All three vendors are comparable in their price for an annual subscription to quarterly-updated discs (see Table below). However, prices vary significantly for backfile discs and retrieval software varies in capability between vendors. There is no substitute for seeing the systems in action (say at a conference exhibit or nearby subscriber) and making your own selection. To help you to do that with as much information in hand as possible, we are reproducing here, as Attachment 87-7, the following items:

(1) the ERIC Digest, "New Access Points to ERIC — CD-ROM Versions" by the IR Clearinghouse, summarizing ERIC-on-CD-ROM developments;

(2) comparison charts from the article "ERIC on CD-ROM: A Comparison of DIALOG OnDisc, OCLC's Search CD450, and SilverPlatter," reprinted with permission from *Online*, September 1987, p. 42-54;

(3) up-to-date sales brochures from all three ERIC-on-CD-ROM vendors

Vendor	**Quarterly Updated Discs Annual Subscription Cost**
SilverPlatter	$650
OCLC	$675
DIALOG	$750

ERICTAPES/ERICTOOLS Revised Sales Brochure

The ERIC Facility used to have over 100 subscribers to the ERIC magnetic tapes. As the online vendors experienced their phenomenal growth, these tape subscriptions slowly dwindled. More and more users elected to sign up for online; fewer and fewer decided to spin their own tapes. Nevertheless, some domestic subscribers remain and some slow growth has been seen amongst overseas clients, where telecommunications costs present a barrier to online communication.

As the files have grown, the costs for complete backfiles have gradually increased. As tape packing densities increased to 6250 BPI, additional options had to be offered. As sponsor names have changed (e.g., NIE to OERI), language in marketing documentation has had to be changed. To make a long story short, the ERICTAPES/ERICTOOLS sales brochures have recently been revised (as of June 1987) to reflect these and other changes. Copies can be obtained upon request to the ERIC Facility.

V. Specific ERIC Publications

(Some Recent Highlights)

ERIC Thesaurus (11th edition, 1987) and *Identifier Authority List* (June 1987 edition)

The 1987 edition of the *Thesaurus of ERIC Descriptors* is now available. It provides access to ERIC's controlled vocabulary (9,459 terms — 5,296 main-entry Descriptors and 4,163 non-indexable Use References and "dead" terms) and is an essential tool for anyone conducting subject searches of the ERIC database. The new edition includes several hundred changes from the 10th, 1984 edition, among revised Introduction entitled "Indexing and Retrieval in ERIC: The 20th Year." The publisher is The Oryx Press, 2214 North Central at Encanto, Phoenix, AZ 85004-1483. Prices are $65.00 (North America) and $78.00 (Elsewhere), plus postage; publisher pays postage if payment is sent with order. Order Toll-Free: 1-800-457-ORYX.

The new June 1987 ERIC *Identifier Authority List* (IAL), which serves as the *Thesaurus'* companion volume or supplement, is currently available as well. Identifiers are semi-controlled subject retrieval terms that are not found in the *Thesaurus*. They may be specific entities (person, place, organization, project, etc.) or new concepts not yet considered for the *Thesaurus*. The IAL consists of two parts. The main *Alphabetical Display* lists the 41,149 preferred Identifier forms in the ERIC files, alphabetically A to Z, together with a category number and postings count for each. The supplemental *Category Display* lists the Identifiers alphabetically within 20 broad categories. Copies can be ordered from the ERIC Facility (postpaid): *Alphabetical Display* ($30.00 U.S./$40.00 non-U.S.,); *Category Display* ($25.00 U.S./$35.00 non-U.S.).

ERIC Clearinghouse Publications (Annual Annotated Bibliography)

Among the tasks performed by the ERIC Clearinghouses is the production each year of several information analysis publications. These are products that generally attempt to synthesize large amounts of information down to a manageable size. These products can be characterized variously as state-of-the-art studies, interpretive summaries, annotated bibliographies, research reviews, digests, etc.

In any given year, the sixteen ERIC Clearinghouses produce over 100 such publications. These are generally published by the Clearinghouses themselves, but some are published by arrangement with host organization publishing enterprises or even with commercial publishers. All such ERIC Clearinghouse publications are entered into the ERIC database and are announced in *Resources in Education* (RIE).

In order to keep a record of this activity of the Clearinghouses, an annual annotated bibliography is produced that lists all ERIC Clearinghouse publications announced in RIE during the immediate past year. This product was formerly produced in quantity for distribution to the public in response to reference inquiries, but during the last few years (1983-1986), it has been possible to print it in only very limited quantities. Nevertheless, some copies are available upon request to the ERIC Facility and, of course, all have been entered into the ERIC database (see Table below).

ACCESSION NUMBER OF BIBLIOGRAPHIES	PAGES	PERIOD COVERED	NUMBER OF ITEMS
ED-029 161	24 p.	FY 1968	149
ED-034 089	34 p.	FY 1969	240
ED-041 598	47 p.	FY 1970	366
ED-054 827	54 p.	FY 1971	416
ED-077 512	55 p.	FY 1972	415
ED-087 411	74 p.	FY 1973	396
ED-126 856	144 p.	FY 1974-1975	534
ED-168 608	168 p.	FY 1976-1977-1978 (thru Dec 1977)	600
ED-180 499	74 p.	Jan-Dec 1978	211
ED-191 502	58 p.	Jan-Dec 1979	159
ED-208 882	64 p.	Jan-Dec 1980	176
ED-224 505	72 p.	Jan-Dec 1981	173
ED-237 098	61 p.	Jan-Dec 1982	181
ED-246 919	52 p.	Jan-Dec 1983	117
ED-261 711	61 p.	Jan-Dec 1984	142
ED-271 125	62 p.	Jan-Dec 1985	176
ED-283 535	89 p.	Jan-Dec 1986	229
		TOTAL (1968-1986)	4680

The *ERIC Clearinghouse Publications* annual annotated bibliography can be an excellent source of highly synthesized and digested information on educational topics of high current interest on the part of either the public or the educational community itself and are highly recommended for this purpose. The ERIC Clearinghouses not only build the ERIC database, they attempt to summarize and interpret it.

Directory of ERIC Information Service Providers

Back in the early 1970's, ERIC began producing a *Directory of ERIC Microfiche Collections.* This directory listed all the organizations possessing an ERIC microfiche collection and providing public access to it. This directory started by being a simple microfiche subscriber list, but after awhile it began to also include some substantial collections at organizations not subscribing to ERIC microfiche on a current basis at that particular moment.

In the later 1970's, ERIC added a second directory entitled the *Directory of ERIC Search Services.* This reference tool listed all the organizations providing computer search services for the ERIC database. It included all the subscribers to ERIC magnetic tapes as well as all the service points making use of online vendors, e.g., DIALOG, BRS, ORBIT.

Both these directories were printed in quantity and were available to the public. Internally, ERIC periodically obtained from the U.S. Government Printing Office (GPO) a list of the subscribers to the ERIC abstract journal *Resources in Education* (RIE). A list of subscribers to *Current Index to Journals in Education* (CIJE) was never available either internally or externally due to the proprietary nature of this list (CIJE always being published by commercial publishers, e.g. Macmillan, Oryx).

With the two formally published directories and the internal RIE subscriber list, ERIC generally had the wherewithal to make effective and geographically-close referrals in reference situations.

In the early 1980's, the noticeable and growing overlap between the two formal directories led to an effort to combine both kinds of information in one directory. In June 1986, ERIC published the first edition of the *Directory of ERIC Information Service Providers,* representing an amalgamation of the two previous directories under a new name. The new directory not only listed more names, but attempted to include a wide variety of communications, clientele, ERIC collection scope, equipment, and services information not previously captured to that extent. Copies of this directory are available upon request from the ERIC Facility.

The new *Directory of ERIC Information Service Providers* will be revised and reprinted approximately every two years. The next edition is currently scheduled for late 1988. With the anticipated push for "ERIC Partners" in 1988, there is great interest in expanding this directory to all relevant organizations. If you are not now listed and would like to be, a sample directory entry and a blank form for sending us a description of your organization appear in Attachment 87-8.

ERIC Ready References

Several years ago, an ERIC computer searcher got the idea that a single sheet showing the ERIC accession number ranges for each calendar year would be a useful tool if placed strategically by his/her online terminal. Thus was born the first "ERIC Ready Reference." Since then, and generally in response to user demand, a total of nine (9) such Ready References have been conceived by ERIC and developed by the ERIC Facility. These are reproduced here as Attachment 87-9 and are listed below.

Users should be aware that copies of these Ready References are available upon request from the ERIC Facility. Users should also be aware that the Facility is constantly searching for new topics to cover with Ready References that would be useful to computer searchers and other users of the ERIC database.

If you have a suggestion to make, please contact the ERIC Facility. If we end up using your idea, we would be happy to give you 100 copies of the end product (usually a single sheet) as a prize!

ERIC Ready Reference	Title
#1	ERIC Accession Number Ranges
2	ERIC Publication Types
3	Sample RIE Resume
4	How to Use the *Thesaurus of ERIC Descriptors* for an Effective ERIC Search
5	ERIC Price Codes
6	ERIC Clearinghouses
7	ERIC Fact Sheet
8	Target Audience
9	ERIC Digests

ERIC Digests — A New Practitioner-Oriented Format, Adds Priority, Increases in Numbers, and Goes Online with Full-Text.

ERIC Digests are short reports (1000-1500 words on one or two pages) on topics of prime current interest in education. They are designed especially for the busy practitioner (teacher, administrator, policymaker, etc.) requiring a review and a synthesis of the most relevant information on the given topic.

Across the past two or three years, there has been an increasing emphasis within ERIC on providing Digests and Digest-type products rather than the bulkier state-of-the-art analyses formally favored. Through July 1987, some 432 ERIC Digests can be identified (see Attachment 87-10 for a complete list). Approximately half of these Digests have been entered into a full-text online file (known as "ERIC Digests Online" or EDO) and made available via the *ED-LINE* online retrieval system (see Attachment 87-9 (#9) for a full description of EDO and how to access it). EDO may in the future also be made available via other online systems, e.g. DIALOG, BRS, etc.

In 1988, the ERIC Clearinghouse contracts will call for a minimum of twelve (12) Digests from each ERIC Clearinghouse. That will result in 192 additional Digests in one year's time and a grand total of well over 600 Digests.

Digests are a high priority and high volume ERIC product. They can be obtained directly from the Clearinghouses (ask to be placed on their mailing lists). They are also announced in RIE and can be viewed on the ERIC microfiche and obtained via EDRS, like any other document announced in RIE. When ACCESS ERIC comes into operation during 1988, Digests will no doubt also be available via that source.

ERIC users are encouraged to obtain Digests, to use them, to comment on them, and to suggest topics suitable for new Digests.

Trends and Issues in Education, 1986 — ERIC Publishes First System-Wide Collaborative Publication:

Generally, each ERIC Clearinghouse produces separate publications concerned primarily with its own particular subject scope area. There has been increasing interest in the possibility of collaborative publications involving two or more ERIC Clearinghouses working together. One of the mandates of the projected future marketing component of ERIC (to be called "ACCESS ERIC") is to foster and facilitate collaborative system-wide publications that will have broad sales appeal.

The first "experimental" collaborative project of this type was worked on during 1986 and was published in early 1987. It is entitled *Trends and Issues in Education, 1986* and it has been processed for the October 1987 issue of RIE, as ED-281 897 (See Attachment 87-11 for complete resume).

Containing 16 chapters, each produced by ERIC Clearinghouse staff, an extended preface by A. Harry Passow, and encompassing 319 pages, this document is ERIC's first effort at employing all components to produce a single publication. Future system-wide projects should be able to build on this experience.

VI. Searchers Corner

Publication Type Statistics (1974-1986)

The literature collected by ERIC for announcement in its abstract journal *Resources in Education* (RIE) is referred to variously as the "fugitive" literature, the "gray" literature, the "report" literature, or the "unpublished" literature. Those unfamiliar with this terminology often inquire about ERIC's coverage. Most abstracting and indexing services restrict themselves to the journal article literature. ERIC does that in its *Current Index to Journals in Education* (CIJE). But RIE, the earlier of the two ERIC journals, covers that segment of the literature that generally precedes the more formally published journal and book literature and that has not been through the same peer reviews and editorial processes of such literature. This literature is harder to acquire, more ephemeral, less standardized in its formats and physical characteristics, and more variable in content and quality. At the same time, it may be newer, more on the "cutting edge", more detailed, and more illustrated.

It is instructive for a searcher to look at exactly what document types or publication types go into RIE. The "Publication Type" data field permits a searcher to restrict searches by type of document. This field was added in September 1974 and after thirteen years of operation has been used to tag approximately 200,000 documents entering RIE. The table on the facing page provides a complete list of the ERIC document types together with a count of how many documents have been tagged with each code and what percentage of the total file (since Sept. 1974) have been tagged with each type code. In situations requiring restrictive search strategy in order to limit otherwise excessive output, the Publication Type field should be seriously considered.

"Target Audience" Data Field

Periodically, ERIC adds new data fields to its basic computer record as they are deemed useful to searchers, practical in their application to documents, and cost effective overall. The last addition was made over three years ago, but it is worth highlighting here because it still has not come to the attention of many ERIC users.

Beginning with *Resources in Education* (RIE) for January 1984 and *Current Index to Journals in Education* (CIJE) for September 1984, ERIC catalogers began to index documents and journal articles by "Target Audience", *if* the author is explicit about intended audience. The indexer is asked not to guess about an intended audience, but to rely solely on explicit statements and similar "hard" evidence.

Eleven (11) possible audiences have been identified: Policymakers, Researchers, Practitioners, Administrators, Teachers, Counselors, Media Staff (e.g., Librarians), Support Staff (e.g., Building Maintenance Staff), Students, Parents, Community. Documents are tagged or indexed by these actual terms, in the Target Audience field, if they are explicitly directed at any of these audiences. More than one audience may be indexed per record. The generic "Practitioners" term is assigned automatically by the computer system if any of the immediately following five more specific types of practitioners are indexed, e.g., teachers.

Each of the major online vendors provides access to the Target Audience field. Since the search protocols are different in each case, however, ERIC has prepared Ready Reference #8 (see Attachment 87-9 (#8) to explicate these differences.

In order to provide potential searchers of this field with some basic information on quantities of postings, etc., the table below has been developed:

Postings
(through 9-87)

Target Audience	RIE (Since 1-84)	CIJE (Since 9-84)
Policymakers	3927	1148
Researchers	5962	3642
Practitioners	14382	12241
Administrators	3195	2644
Teachers	7562	5335
Counselors	577	232
Media Staff	432	727
Support Staff	230	156
Students	2133	144
Parents	581	304
Community	906	108

Grade Level and Age Group Searching in ERIC

Searching for documents in which age group or grade level are significant variables is not the easiest thing in the world in the ERIC system. The ERIC indexers must index for both manual retrieval (in abstract journal indexes) and computerized retrieval. They must indicate major index terms and minor index terms. They must contend with documents that can cover virtually any sequential combination of age/grade levels (or that may not specify any such level). They must work within a framework of words/terms referring to these levels that may often be confusing to the non-specialist, e.g., "intermediate grades", "middle schools", "postsecondary education", "toddlers", "older adults", etc. The *ERIC Processing Manual* has developed rules and guidelines for coping with these problems during the indexing phase, but these are not always known in detail by searchers.

That is why it is worthwhile calling the attention of searchers to a recent article in *Database* magazine by Virginia Seiser (University of New Mexico General Library) entitled "ERIC Through the Ages: Searching for Information about Specific Age Groups in the ERIC Database" (*Database*, August 1987, p. 75-82).

Ms. Seiser has taken the trouble to familiarize herself thoroughly with ERIC's rules for indexing age/grade levels and does an excellent job of wading through the complexities and providing the would-be searcher with useful information and advice. (See for example the figures reproduced, with permission, on page 14). This article is highly recommended.

PUBLICATION TYPES IN THE ERIC DATA BASE (RIE)

(September 1974-December 1986)

Rank	Code	Publication Type	Date Initiated	Accessions Coded by Pubtype	Percent of Accessions Carrying Pubtype
1	143	Research/Technical Reports	9/74	57,269	31.4
2	150	Conference Papers/Speeches (Single Papers)	9/74	41,070	22.5
3	141	Project/Program Descriptions	9/74	23,755	13.0
4	050	Guides – General	9/74	14,329	7.9
5	120	Opinion Papers	9/74	13,678	7.5
6	052	Teaching Guides (For Teacher)	7/79	12,495	6.9
7	055	Guides – Non Classroom (For Support Staff)	7/79	10,108	5.5
8	070	Information Analyses	9/74	8,232	4.5
9	131	Bibliographies	9/74	7,482	4.1
10	010	Books	9/74	7,474	4.1
11	142	Evaluative/Feasibility Reports	7/79	6,996	3.8
12	051	Instructional Materials (For Learner)	7/798	6,072	3.3
13	110	Numerical/Quantitative Data	9/74	5,009	2.7
14	021	Conference Proceedings	9/74	4,106	2.3
15	160	Tests, Measurement Instruments	9/74	4,025	2.2
16	090	Legal/Legislative/Regulatory Materials	9/74	3,486	1.9
17	040	Dissertations (Level Undetermined)	9/74	2,553	1.4
18	080	Journal Articles	9/74	2,529	1.4
19	022	Serials	7/79	2,255	1.2
20	132	Directories/Catalogs	9/74	1,834	1.0
21	140	Reports – General	7/79	1,604	.9
22	020	Collected Works	7/79	1,109	.6
23	071	ERIC Information Analysis Products	6/80	1,083	.6
24	060	Historical Materials	9/74	932	.5
25	999	Miscellaneous	9/74	887	.5
26	134	Vocabularies/Classifications	9/74	448	.2
27	042	Masters Theses	7/79	434	.2
28	130	Reference Materials – General	7/79	413	.2
29	041	Doctoral Dissertations	7/79	296	.2
30	043	Practicum Papers	7/79	225	.1
31	171	Multilingual/Bilingual Materials	4/83	223	.1
32	030	Creative Works	7/79	181	.1
33	100	Audiovisual Materials	9/74	157	.1
34	170	Translations	7/79	64	.04
35	101	Computer Programs	7/84	40	.02
36	133	Geographic Materials	9/74	24	.01

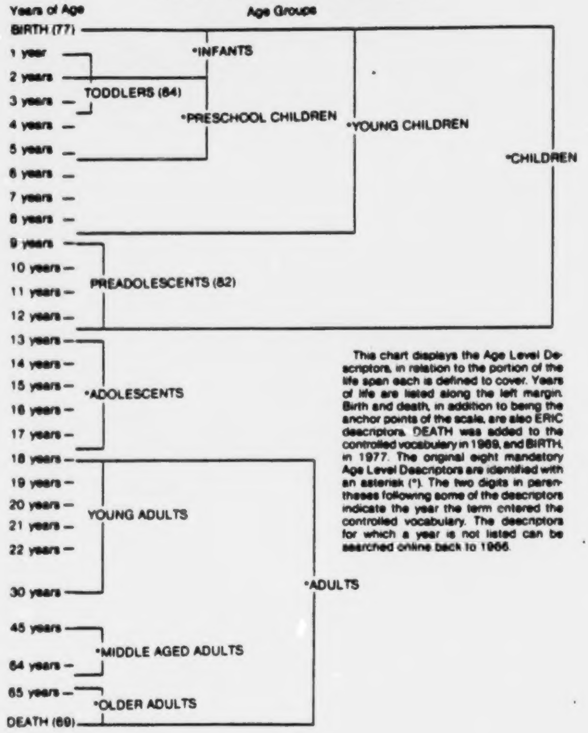
TOTAL 242,877

NOTE Number of Accessions in this Period of Time = 182,289

$\frac{242,877}{182,289}$ = 1.3 Pubtypes per Accession

BEST COPY AVAILABLE

Chart 1. **ERIC Age Level Descriptors**



This chart displays the Age Level Descriptors, in relation to the portion of the life span each is defined to cover. Years of life are listed along the left margin. Birth and death, in addition to being the anchor points of the scale, are also ERIC descriptors. DEATH was added to the controlled vocabulary in 1969, and BIRTH, in 1977. The original eight mandatory Age Level Descriptors are identified with an asterisk (*). The two digits in parentheses following some of the descriptors indicate the year the term entered the controlled vocabulary. The descriptors for which a year is not listed can be searched online back to 1966.

Chart 2. **Mandatory Educational Level Descriptors**

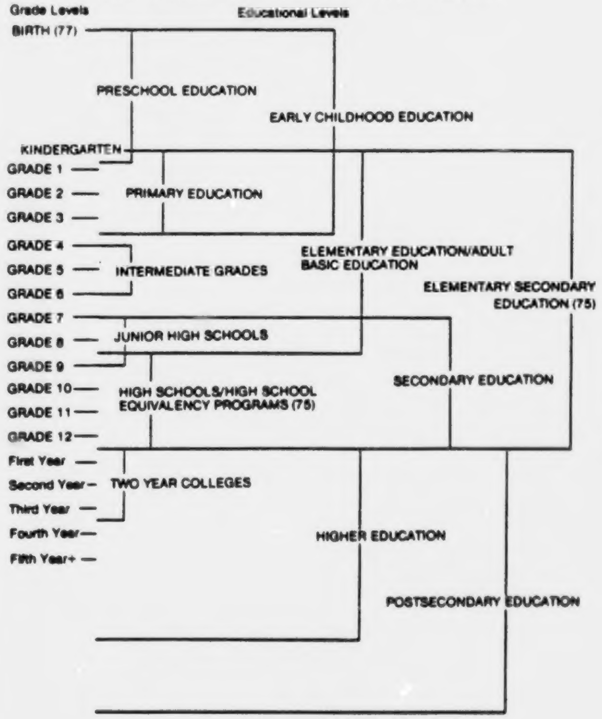
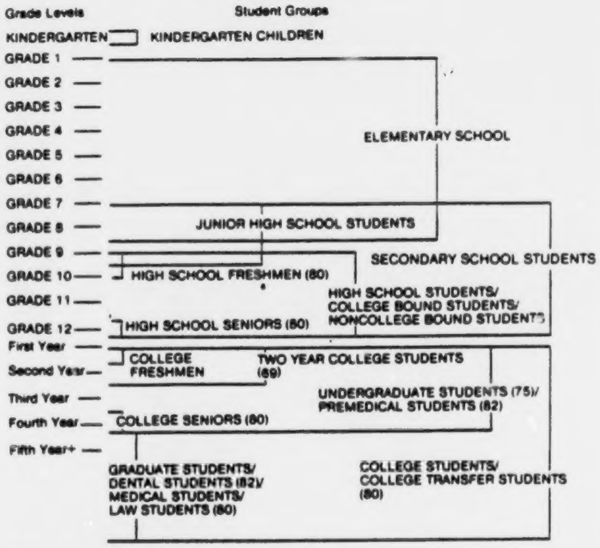


Chart 3. **Student Level Descriptors**



Reprinted with permission from:
"ERIC Through the Ages: Searching for Information about Specific Age Groups in the ERIC Database", (*DATABASE*, August 1987, pp. 75-82).

VII. Miscellaneous

Requests to Reproduce ERIC Bibliographic Records (or the Documents Represented by those Records) — ERIC's Standard Response

A week doesn't pass that ERIC doesn't get an inquiry seeking permission to download, or to duplicate ERIC bibliographic records, or to reproduce documents that have been reduced to ERIC microfiche. The responses can generally be positive. ERIC's bibliographic records are in the public domain and their further dissemination is encouraged by ERIC as long as the proper accession number (ED or EJ) accompanies each record and as long as proper attribution is made as to the source of the records. Any Federally-funded documents or contractor reports in ERIC are generally in the public domain and can be reproduced without restriction. However, in all other cases, where ERIC has obtained the source's permission to reproduce, this permission extends only to ERIC. Outside users wishing to reproduce in quantity a non-Federal document found in ERIC should seek such permission from the original source (presumably the copyright holder), if their projected reproduction will exceed the "fair use" guidelines.

In order not to have to create new "customized" responses each time such an inquiry arrives and in order to provide consistent and accurate responses in a timely fashion, the ERIC Facility has developed a "standard" response to all such inquiries. This standard response is shown as Attachment 87-12.

BEST COPY AVAILABLE

RIE "Special Announcements"

The inside front cover of *Resources in Education* (RIE) is used to call attention to various new publications or developments of special interest to ERIC users: e.g., *A Nation at Risk* and *First Lessons* were both highlighted there; the 1987 edition of the ERIC *Thesaurus* was announced there; RIE subscription price changes and EDRS microfiche price changes always have their effective dates provided here as soon as they are known.

However, the cover of a monthly abstract journal is a peculiarly vulnerable item. When libraries bind the journal for permanent shelving, the covers are usually lost in the process. When cumulative editions are published in hard cover, only the text is reprinted and the paper cover special announcements are left behind.

For these and other reasons, these "special announcements" are sometimes not seen by all the ERIC users that could benefit from them. Attachment 87-13 is a selection of some of the "special announcements" of the past two years. If you find these of interest, perhaps you will look for them in future RIE issues, as they are published.

Educational Resources Information Center

Ted Brandhorst

ERIC Processing and Reference Facility,
4833 Rugby Ave., Suite 301, Bethesda, MD 20814
301-656-9723

In November 1985, the National Institute of Education (NIE), the parent agency of the Educational Resources Information Center (ERIC), changed its name to the Office of Educational Research and Improvement (OERI). The new organization remains a unit of the U.S. Department of Education.

The year 1986 marked the twentieth anniversary of the ERIC system. The first issue of *Resources in Education (RIE)*—then *Research in Education*—was published in November 1966. Since that time, ERIC has cataloged, indexed, and abstracted/annotated 606,402 bibliographic entities (265,600 documents and 340,802 journal articles), has produced more than 4,500 information analysis products synthesizing this vast literature, and has distributed more than 250 million microfiche around the world containing the full text of the documents processed. Access to the ERIC database is provided online by all of the major online vendors, and ERIC has remained for several years the fourth most searched database in the United States and the most searched database in the area of the social sciences/humanities. ERIC has a well-earned reputation as the U.S. national bibliographic database for the field of education. In 1986, *Resources in Education* announced 12,474 document accessions; *Current Index to Journals in Education (CIJE)* announced 17,776 journal article accessions.

New Products/Publications

Directory of ERIC Information Service Providers

The *Directory of ERIC Information Service Providers* was issued in June 1986. It is a comprehensive list of 891 organizations (780 in the United States, 111 in 22 other countries) that offer some level of ERIC service. Each entry states (among other things) whether the organization subscribes to the ERIC abstract journals and the ERIC microfiche, collects ERIC Clearinghouse information analysis products, does computer searches of the ERIC database, or provides users with access to the *Thesaurus of ERIC Descriptors*. Full address, contact point, and telephone information is provided. The *Directory* is free.

ERIC Thesaurus

The eleventh edition of the ERIC *Thesaurus*, published by Oryx Press in November 1986, contains 9,459 index terms (of which 5,296 are main entry descriptors and 4,163 are synonyms or other unused terms). New to this edition are 224 descriptors, 190 synonyms, and several hundred scope note and cross-reference modifications. It is available from Oryx Press for $65.

ERIC Digests

ERIC Digests are short (1–2-page) write-ups on topics of high interest to practitioner-level educators. They are designed specifically to provide the busy teacher, administra-

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The Bowker Annual of Library and Book Trade Information (1987), p.136-139.

tor, counselor, or other practitioner with synthesized information of direct and immediate relevance, together with pointers to other sources for more details. Since 1985, the ERIC Clearinghouses have made the production of ERIC Digests a priority activity. An "ERIC Digests Online" (EDO) full-text file is already up on ED-Line via The Source and may be mounted elsewhere during 1987.

ERIC on Compact Laser Disc (CD-ROM)

In August 1986, OERI and SilverPlatter, working in partnership, shipped the first ERIC CD-ROM product. A disc containing both *RIE* and *CIJE* data from January 1983 to the present was sent to a group of charter subscribers. The disc is updated quarterly. The retrieval software is provided on an accompanying floppy disc. Subscribers only need an IBM-PC (or equivalent) with 512K of internal memory together with a CD-ROM data disc drive to operate the system. The backfile (1966–1982) is available on two discs for a one-time purchase price of $2,000.

In November 1986, DIALOG also announced an ERIC CD-ROM product. It offers a current disc, containing data from 1981, to be updated quarterly on subscription for $1,950. The backfile (1966–1980) and the current file are available together for a $3,450 recurring annual license fee. The DIALOG CD-ROM attempts to emulate the DIALOG 2 capabilities insofar as is possible and requires an IBM-PC with at least a 10-megabyte hard disc and a CD-ROM data disc drive.

The CD-ROM systems provide users with the advantages of a fixed-cost self-contained system not dependent on connect time, telecommunications charges, and output volume.

Changes to Existing Products

RIE Subscription Price

Following price reevaluation by the Government Printing Office (GPO), *Resources in Education* benefited from a subscription rate reduction. Effective February 1985, the price was lowered from $95 to $56 per year, for 12 monthly issues, making it one of the information bargains of the year.

ERIC Microfiche Price

Effective October 20, 1986, the ERIC Document Reproduction Service (EDRS) was granted a modest price increase for ERIC microfiche. For microfiche provided by subscription, the increase was $0.002 (two mils) per fiche (from $0.078 per fiche to $0.080 per fiche). For microfiche provided on-demand, the increase was $0.03 per title from $0.75 per title [up to five fiche] to $0.78 per title). Even so, with the price reductions of the past few years, the cost of a year's subscription to ERIC microfiche is down to approximately $1,300 per year (from a previous high of approximately $2,000 per year).

ERIC Microfiche Film Base

Several years ago, the ERIC microfiche were changed from a diazo film base to a vesicular film base because vesicular offered a considerable price advantage. Now that diazo film has become cost competitive, and because of the various other advantages offered by diazo film (for example, it is more durable and rugged, more easily reproduced fiche-to-fiche), EDRS changed back to diazo distribution fiche effective March 1986.

ERIC Clearinghouse Changes

The ERIC Clearinghouse for Social Studies/Social Science Education (SO), which was located at the Social Science Education Consortium in Boulder, Colorado, moved to the Social Science Development Center at Indiana University in Bloomington, Indiana. The new Clearinghouse began operations in January 1986.

Future Directions

Education Statistics

ERIC has conceived two projects to make education statistics more accessible to its users. One project involves creating a directory file that will list existing bodies of statistical data pertaining to education. Each entry will fully describe and index a data file and will inform the user as to the file's availability and any publications that summarize its content. The files of the Center for Education Statistics, CES (formerly the National Center for Education Statistics, NCES), will be the first files cataloged and indexed. This project is underway. The other project involves the actual mounting of selected statistical files online and providing users with direct access to them for searching, answering questions, and data manipulation to arrive at new graphs, tables, totals, and configurations of the data. This project is in the planning stage.

InterEd: An International ERIC-like File

During 1986, meetings and discussions were held among representatives of the *Australian Education Index (AEI)*, the *British Education Index (BEI)*, the *Canadian Education Index (CEI)*, and ERIC. The objective was to explore possible coordination of activities and collaborative projects that would eliminate or reduce any duplication or overlap among the four groups, that would lead to convergence of practice and authority lists, and that might result in an integrated "family" of databases covering the total English-language literature of education. (The group of representatives is tentatively called InterEd; the non-U.S. files as a group are called ERIC International.) These exploratory discussions were undertaken without any specific funding, but all participants are optimistic that some concrete progress toward the goals will be made in 1987.

ERIC Redesign Study Panel

In 1986, OERI formed an 18-person ERIC Redesign Study Panel to examine ways in which ERIC could be strengthened and improved. Two meetings were held and several discussion papers were issued. Although no final report was prepared, the minutes of the meetings contained several suggestions for improvement. For example, in the subject coverage area, better coverage of the arts and humanities and of secondary education was recommended. Additional efforts were recommended to train members of the educational community in the use of ERIC. Practitioners and their needs should continue to be a high priority for ERIC, both in terms of the kinds of materials acquired and in the kinds of products offered. No specific recommendations were made by the panel for the restructuring of the ERIC Clearinghouse network.

On December 8, 1986, OERI, pursuing the redesign effort, issued a document entitled "ERIC in its Third Decade," and public comment was solicited. This document is described as a "statement of principles," to be followed later by an "implementation" paper. OERI found ERIC's major shortcomings to be (1) lack of an institutional policy to guide the system, (2) failure to reach all potential ERIC users, (3) not stressing the practitioner strongly enough in acquisitions and dissemination efforts, (4) little systematic attention to marketing and dissemination efforts, and (5) inadequate integration with other information systems (including those within OERI).

Some of the new emphases planned by OERI for ERIC are (1) extending the user community, (2) stressing the dissemination and information marketing function, (3) linking ERIC with OERI's regional laboratories and research centers, (4) using National Diffusion Network (NDN) state facilitators as "ERIC agents," (5) forming "adjunct" ERIC Clearinghouses that will contribute to the ERIC system but on a voluntary no-government-funding basis, (6) offering toll-free telephone numbers in each ERIC Clearinghouse, (7) using the latest technology, (8) engaging in international cooperation with counterpart organizations abroad, (9) stressing cost sharing in contract solicitations, (10) giving a balanced treatment to the various kinds of educational literature, and (11) supporting the OERI priority on education statistics.

Regarding the structure of ERIC Clearinghouses, where major changes have been rumored, OERI's paper states: "Changes in American education dictate some new combinations of 'hybrid' configurations. We plan to organize the domains of future ERIC Clearinghouses around major functional categories of American education that are now and will be salient during the next decade."

ERIC

The Educational Resources Information Center marked 20 years of service to education in 1986, when over 1,000 documents were announced in each issue of *Resources in Education*, the monthly index of documents entered in the ERIC database. The 12,474 documents processed during the year brought the total number of documents announced in RIE since the first issue was published in November 1966—with 45 document entries—to 265,000 at the end of the year. There were more than 2,000 subscribers to RIE in 1986.

Ninety-eight percent of the documents announced in RIE in 1986 are available in full text through the ERIC microfiche collection or through the ERIC Document Reproduction Service. EDRS can fill individual orders for any of the documents in the microfiche collection with microfiche copies or, for most of these documents, with paper copy. Full-text copies of the remaining two percent of the documents are available only from the sources stated in RIE for each document. From January through October 1986, EDRS had distributed 10,416,493 microfiche to their 762 standing order customers, while orders from individual customers totaled 17,957 microfiche and 25,389 titles in paper copy.

A total of 17,766 journal articles were annotated and indexed for *Current Index to Journals in Education*, the monthly index of the journal literature from ERIC, an average of some 1,480 each month. The number of journal articles announced in CIJE since this service was implemented in 1969 totaled 340,802 at the end of 1986. A study by the CONSER Abstracting and Indexing Project at the Library of Congress found that of 767 journals covered by CIJE in 1986, 82 percent were published in the United States, 3 percent in Canada, and 15 percent in foreign countries. The study also found that 297 of these titles overlapped with coverage by *Education Index*, 222 with *Psychological Abstracts*, 187 with *Sociological Abstracts*, and 35 each with *Library and Information Science Abstracts* and *Library Literature*.

Journals covered by CIJE are available through many libraries, and reprints of individual indexed articles are available from University Microfilms International for about 75 percent of the journals covered. There were some 1,700 subscribers to CIJE in 1986.

The 30,240 documents and articles processed by the ERIC system in 1986 brought the total number of citations in the database to 606,402 at the end of the year.

The *Directory of ERIC Service Providers*, published by the ERIC Processing and Reference Facility in 1986, lists 891 organizations that provide computerized searches of the database, have sizeable collections of the ERIC microfiche (all current subscribers and those having a collection that covers two years or more), and that subscribe to and collect the various ERIC publications, including RIE, CIJE, and *The Thesaurus of ERIC Descriptors*. These organizations include 86 government agencies at the federal, state, and local levels; 672 nonprofit organizations, including higher education institutions, public libraries, and ERIC clearinghouses; 12 for-profit organizations; one individual; nine organizations in outlying U.S. territories; 110 foreign organizations (both governmental and nongovernmental); and one international organization.

Database Activities. The 11th edition of *The Thesaurus of ERIC Descriptors* was published by Oryx Press late in 1986 to update the 10th edition published in 1984. The new edition contains some 224 new terms for a total of 5,296 descriptors (indexable or main terms) and 4,163 nonindexable "use for" terms and invalid terms.

The ERIC Digest File Online (EDO), developed and maintained by the ERIC Clearinghouse on Elementary and Early Childhood Education, was up and running on Edline (The Source) during 1986. The digests (two-page summaries of information on cutting edge topics in education) are prepared by each of the 16 clearinghouses, and are also available in paper copy and in the microfiche collection.

The development of a new ERIC file on statistical and numeric databases in education was begun in 1986 by the ERIC Processing and Reference Facility. The file will contain descriptions of approximately 50 education-related databases, beginning with the National Center for Education Statistics, and will be incorporated in the ERIC database.

The ERIC microfiche, which were originally produced on silver halide film (still a special option for standing order customers), were changed from vesicular film to the less expensive and more durable diazo during 1986. These microfiche are shipped without envelopes to save storage space.

During 1986, ERIC was made available on compact disks by SilverPlatter. It is a self-contained, fixed-cost system for local use without connect or communications costs, and provides for searching with Boolean logic and printing-out search results.

Current Status. The ERIC system is now funded through the newly established Office of Educational Resources and Improvement in the U.S. Department of Education rather than through its predecessor, the National Institute of Education. Each of the 16 clearinghouses in the decentralized network collects and processes information on particular areas and aspects of education for inclusion in the database and announcement in RIE, and annotates articles from professional journals in its scope area for CIJE.

The contents of these two indexes make up the ERIC database, which is available for online searching. Emphasis is on the ephemeral literature of education—for example, research reports, project descriptions, conference papers, curriculum guides, and program descriptions. Materials useful to practitioners and policymakers are particularly sought after.

In addition to actively soliciting documents and processing them for the database, individual clearinghouses publish literature reviews and resource guides, digests, minibibliographies, and other materials on topics of current interest in their scope areas, and they provide reference services for ERIC users.

BARBARA B. MINOR;
DONALD P. ELY

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The ALA Yearbook of Library and Information Services. A Review of Library Events 1986.
Volume 12 (1987). Chicago, IL: American Library Association, 1987, pp. 127-128.

ERIC System Fact Sheet

(June 1987)

The Educational Resources Information Center (ERIC) is a comprehensive education information system that makes English-language education literature easily accessible to teachers, administrators, scholars, parents, students, and other interested people. ERIC is used almost 3 million times a year.

ERIC is federally-funded and administered by the Department of Education's Office of Educational Research and Improvement (OERI). It includes a nationwide network of 16 subject-oriented Clearinghouses which collect, synthesize, and disseminate education documents and publications. Support services for the ERIC system are provided by the ERIC Document Reproduction Service (EDRS) and the ERIC Processing and Reference Facility (ERIC Facility). The ERIC Clearinghouses, EDRS, and the ERIC Facility are contracted through a competitive bidding process. The total annual expenditure for the development, distribution, and use of ERIC resources in the U.S. is estimated at $136 million. Only 4.1% of that is provided by Federal government funding.

The ERIC database contains over 600,000 bibliographic entries, representing research studies, program descriptions and evaluations, conference proceedings, bibliographies, curriculum guides, state-of-the-art papers, journal articles, and many other types of education materials. Information stored in ERIC is available at more than 3,000 locations worldwide, mostly in public and school libraries, colleges, universities, and educational organizations. Typically, information searchers use ERIC indexes in print or in online computer formats to find relevant documents. Documents may be copied at many locations from microfiche files or EDRS will duplicate the documents and mail them to users for a small fee.

This year OERI will hold a nationwide competition to find contractors to support an expanded ERIC system. The upcoming competition will reflect the results of a year-long study and public discussion (over 125 persons submitted comments and recommendations to OERI on its proposed redesign for the ERIC system).

The "new" ERIC will include ACCESS ERIC, Adjunct Clearinghouses, and ERIC Partners, as well as the existing network of 16 Clearinghouses and direct support activities such as EDRS and the ERIC Facility.

- **ACCESS ERIC:** Designed to make the ERIC more accessible to educators and policymakers who do not know how to use the system, this addition to ERIC will conduct efforts throughout ERIC to increase awareness and use of ERIC information. ACCESS ERIC activities may include dissemination, training of searchers, and the development of broad, synthesizing documents on education topics of current interest.

- **Adjunct Clearinghouses:** These new "Clearinghouses" will acquire documents and journal articles for the ERIC database in areas not adequately covered by the current network of Clearinghouses and will disseminate this information in various formats. In fiscal year 1988, OERI plans to provide seed money to establish three or more Adjunct Clearinghouses in areas such as education policy, art and music, private education, secondary education, education reform, education in the humanities, students at risk, or education professionalism.

- **ERIC Partners:** These will be organizations or institutions with particular interests either in the ERIC system or in specific disciplines included in the ERIC system. ERIC Partners will actively disseminate ERIC-developed materials to their constituents or members and will help identify documents or materials to be considered for the ERIC database. ERIC Partners will not receive direct Federal funding, although they may receive training to effectively use the ERIC system.

- **ERIC Clearinghouses:** The names of the Clearinghouses will remain as in the current configuration (listed below). The system of 16 Clearinghouses will have the same functions and scope of work as before. Clearinghouse products and services will, however, reach a wider, more diverse audience.

ERIC CLEARINGHOUSES

ERIC Clearinghouse on Adult, Career, and Vocational Education
ERIC Clearinghouse on Counseling and Personnel Services
ERIC Clearinghouse on Educational Management
ERIC Clearinghouse on Elementary and Early Childhood Education
ERIC Clearinghouse on Handicapped and Gifted Children
ERIC Clearinghouse on Higher Education
ERIC Clearinghouse on Information Resources
ERIC Clearinghouse for Junior Colleges
ERIC Clearinghouse on Languages and Linguistics
ERIC Clearinghouse on Reading and Communications Skills
ERIC Clearinghouse on Rural Education and Small Schools
ERIC Clearinghouse for Science, Mathematics, and Environmental Education
ERIC Clearinghouse for Social Studies/Social Science Education
ERIC Clearinghouse on Teacher Education
ERIC Clearinghouse on Tests, Measurement, and Evaluation
ERIC Clearinghouse on Urban Education

- **ERIC Processing and Reference Facility:** The Facility coordinates the technical aspects of ERIC, edits and computer processes documents for entry in the ERIC database, and maintains quality control standards for the ERIC system.
- **Education Statistics Reference Center:** The Education Statistics Reference Center, to be housed in OERI, will identify important education-related data tapes and databases and will provide referral services for clients seeking access to such education data. Information about data tapes that meet technical standards developed by the Center for Education Statistics will be entered into the ERIC system by the Clearinghouses and the ERIC Facility.

COMPETITION SCHEDULE

Competitions for the new components of ERIC and the Clearinghouses will begin in the summer of 1987. OERI anticipates awarding new five-year contracts for ERIC Clearinghouses by January 1, 1988. Awards for ACCESS ERIC, Adjunct Clearinghouses, and the ERIC Facility will follow.

ERICSTAT Project
Sample Resume for Education-Related Data File

ACC____EF000102

CH____

TITLE____Migrant Student Record Transfer System File

ACRO____MSRTS

INST____BBB23546=Arkansas State Dept. of Education, Little Rock. General Education Division.

SPON____EDD00031=Office of Elementary and Secondary Education (ED), Washington, DC. Migrant Education Programs.

CONTN____Migrant Student Record Transfer System; Arkansas State Department of Education

ADDR____Arch Ford Education Building, Room 226A; Fifth and Woodland Streets; Little Rock, AR 72201

TEL____(501 371-1853); (501) 375-4960

FREQ____Daily

METH____Education and health data on migrant children (K-12) are collected by local public school and health record clerks, as designated by the State Migrant Director, and then transferred to local or state data entry centers which in turn communicate the information to the MSRTS central office at the Arkansas State Department of Education.

RESP____Education and health service providers at approximately 17,000 local public schools working with migrant students.

TYPE____National Survey; Follow-Up Survey

YEAR____1987

FIRST____1970

GEO____U.S.; including the District of Columbia and outlying Territories, but not Hawaii

POP____Migrant elementary/secondary school students

SAMP____Migrant elementary/secondary school students (750,000)

VAR____Age;
Allergies;
Birth Date;
Birthplace;
Early Childhood Skills;
Educational Skills;
Eligibility Limit;
Free Lunch Program Participation;
Graduation Competency Test;
Graduation Requirements;
Health History (Personal) Graduation Requirements;
Health Problems (Acute);
Health Problems (Chronic);
Health Providers (Recent);
Health Providers (School);
High School Courses Required;

Home Base (of Student);
Immunization Data;
Language for Instruction;
Last Qualifying Move;
Mathematics Skills;
Medical Examinations;
Medical Examinations (General) (Special);
Name;
Oral Language Skills;
Parents (Current);
Parents (Legal);
Race;
Reading Skills;
Residence;
School Courses Recommended;
School History Data;
School Subjects (Current);
Secondary Schools Attended;
Secondary School Credits Accrued;
Sex;
Special Education Programs;
Supplemental Education Programs;
Termination Date;
Test Data;

CODES____International Classification of Diseases (ICD); Physician's Current Procedural Terminology (CPT)

ID____Student ID (8-Digit)

NOTE____Due to the confidentiality of the information in the MSRTS file, access is restricted and is controlled through the Migrant Office Coordinator in each state. Certain reports are prepared regularly; customized reports are available to states on request.

ABST____The Migrant Student Record Transfer System (MSRTS) file is a collection of education and health data on more than 750,000 migrant children in grades K-12 in the United States (except Hawaii), the District of Columbia, and the outlying territories of Puerto Rico and the Mariana and Marshall Islands. The active file contains approximately 425,000 records as of 1987 ; the remaining 325,000 records are contained in an historical file. The system was started in 1970 and continuously collects data on migrant students through a nationwide network of cooperating public schools, medical facilities, migrant service organizations, migrant office coordinators in each state education agency, and a central office at the Arkansas State Department of Education (Little Rock), where the master MSRTS file is updated and maintained. As migrant students relocate with their parents, the education and health communities in the areas being moved into can obtain via MSRTS essential educational and health data on the students received. This permits them to concentrate on meeting the student's needs and providing continuity of services rather than on testing and determining what those needs are. When MSRTS receives notification from an enrolling school, the student's complete record to date is forwarded to that school. The enrolling school will then add to that record during the student's tenure with that school. By definition, a migratory child is the child of a migratory agricultural worker or a migratory fisherman whose family moves across school district boundaries or from one state to another for the purpose of finding temporary or seasonal employment. Once this determination is first made and certified, a certificate of eligibility is prepared and signed by the parent/guardian, records clerk, and local superintendent. This data is transferred by computer terminal to the MSRTS data center in Arkansas, where the child is assigned a unique 8-digit numeric code and a record is initiated. In the course of time, two classes of records are generated: educational data and health data. The educational data includes such fields as: educational skills, graduation requirements, recommended courses, most recent class schedule, secondary school credits, language for instruction, school history data, secondary school credits accrued, secondary schools attended, special education programs taken, talents, test data, etc. The medical and health data includes such fields as: immunization data, medical test results, health problems (acute and chronic), family medical history, allergies, prior health providers, etc. (WTB)

DESC___Academic Records;
*Attendance;
*Credits;
*Educational Background;
*Educational Needs;
*Family Health;
Graduation Requirements;
*Health Needs;
Health Programs;
Health Services;
Immunization Programs;
Listening Skills;
Mathematical Skills;
Medical Case Histories;
*Migrant Children;
*Migrant Education;
Migrant Health Services;
Migrant Programs;
National Surveys;
*Reading Skills;
School Schedules;
Scores;
Secondary Schools;
*Special Health Problems;
Speech Skills;
*Student Needs;
Student Records;
Talent

IDEN___*Migrant Student Record Transfer System

SERV___Special Tabulations; Report Generation

PUBS___MSRTS Resource Guide for Teachers and Health Providers (ED); Manual for Recruiters, MSRTS Record Clerks, and Terminal Operators. (ED 192 981); Migrant Student Record Transfer System: What Is It and Who Uses It? ERIC Digest.

Thesaurus of ERIC Descriptors

11th Edition—1986

The Definitive Vocabulary of Education

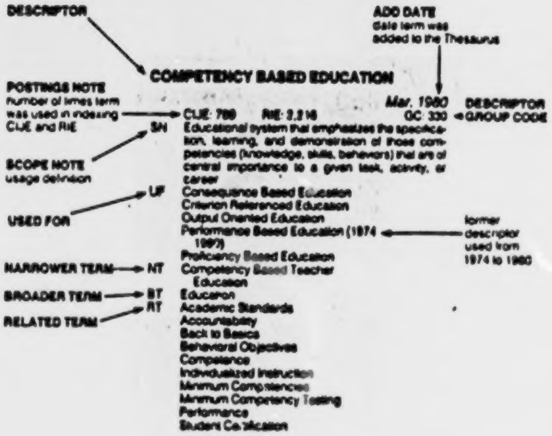
The constantly changing information in the database of the Educational Resources Information Center (ERIC) reflects the dramatic growth in the field of education. To search this valuable database in either its electronic or print format, you need to know the most current special ERIC vocabulary—you need the new 1986 *Thesaurus of ERIC Descriptors.*

The *Thesaurus of ERIC Descriptors* lists terms used by the ERIC system in indexing and abstracting education literature, providing convenient access to the documents cited in *Resources in Education* and *Current Index to Journals in Education.* Without the new, updated thesaurus at your fingertips, you risk overlooking vital information!

Special Features

- Nearly 200 changes from the 10th edition
- An extensive introduction describing the ERIC system and providing keys for using the thesaurus
- Information displayed to aid searching in 4 ways: Alphabetical Display, Rotated Descriptor Display, Hierarchical Display (including broader and narrower relationships), and Descriptor Group Display (a table of contents to the Descriptors)
- Sturdy reinforced cloth binding designed to stand up to the thesaurus's continual heavy use!

Sample Thesaurus Entry Alphabetical Descriptor Display)


DESCRIPTOR
ADD DATE
date term was added to the Thesaurus
COMPETENCY BASED EDUCATION
POSTINGS NOTE
number of times term was used in indexing CIJE and RIE
Mar. 1980
DESCRIPTOR GROUP CODE
CIJE: 789
RIE: 2,216
GC: 330
SN
Educational system that emphasizes the specification, learning, and demonstration of those competencies (knowledge, skills, behaviors) that are of central importance to a given task, activity, or career
SCOPE NOTE
usage definition
UF
Consequence Based Education
Criterion Referenced Education
Output Oriented Education
Performance Based Education (1974 1980)
USED FOR
former descriptor used from 1974 to 1980
Proficiency Based Education
NARROWER TERM
NT
Competency Based Teacher Education
BROADER TERM
BT
Education
RELATED TERM
RT
Academic Standards
Accountability
Back to Basics
Behavioral Objectives
Competence
Individualized Instruction
Minimum Competencies
Minimum Competency Testing
Performance
Student Certification

Thesaurus of ERIC Descriptors, 11th Edition—1986. October 1986 / 640 pages / 8½ x 11 / Clothbound / ISBN 0-89774-159-5 / $65.00(t)

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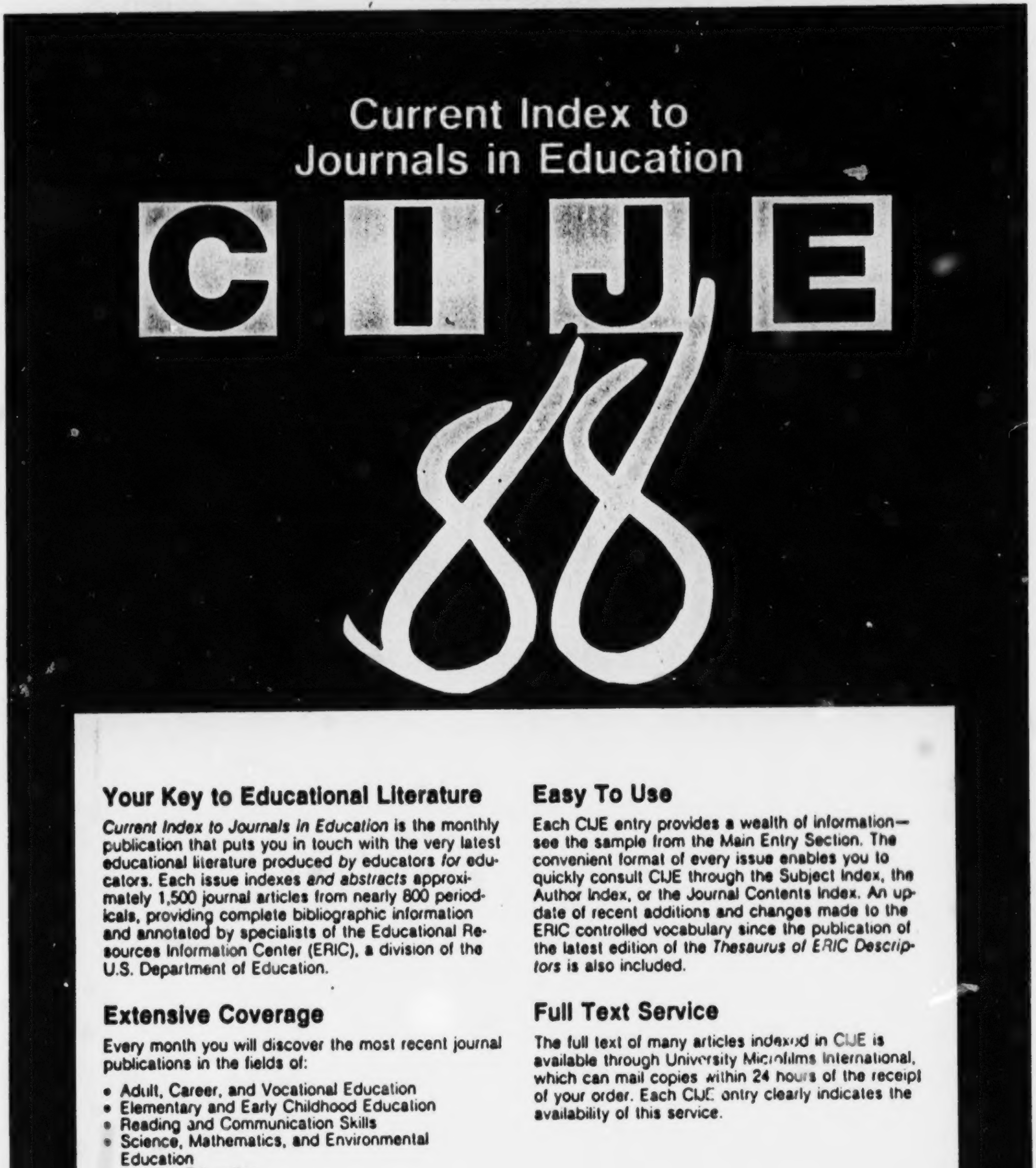
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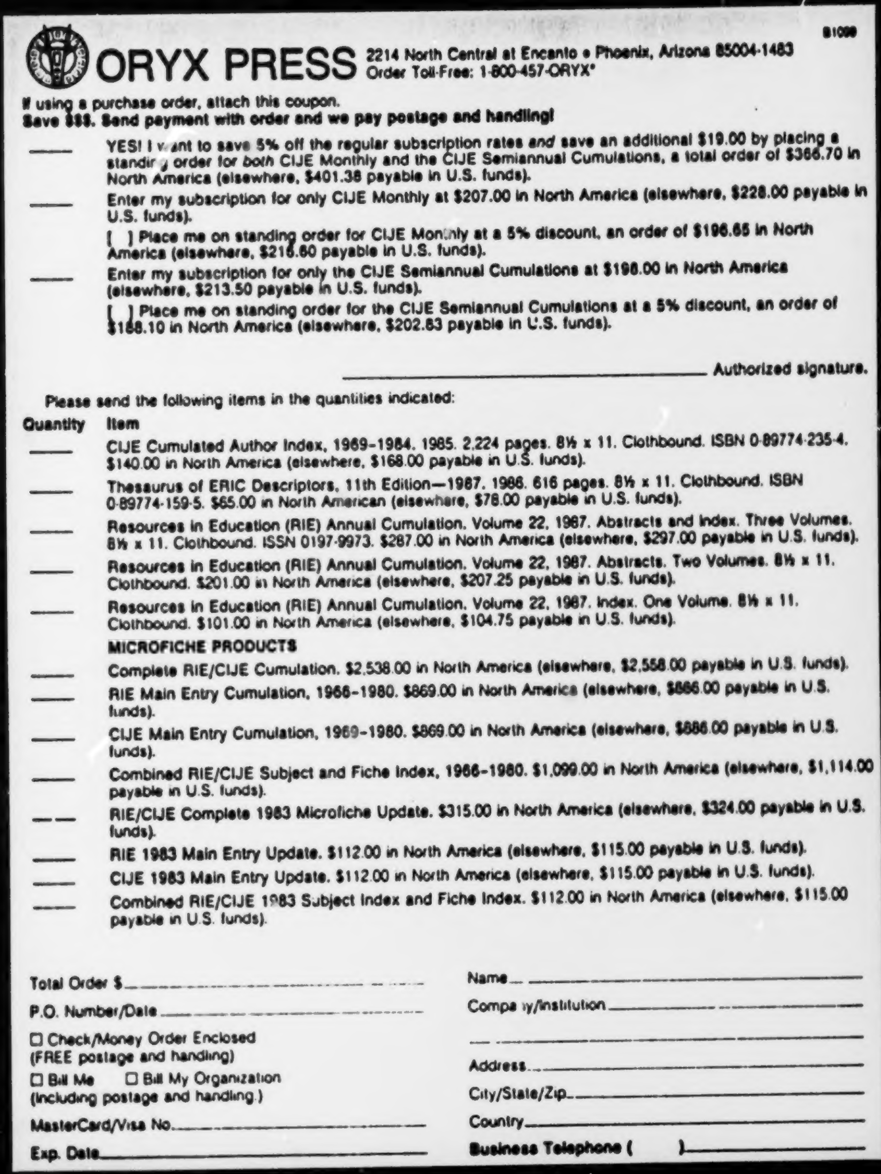

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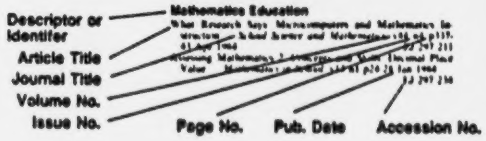

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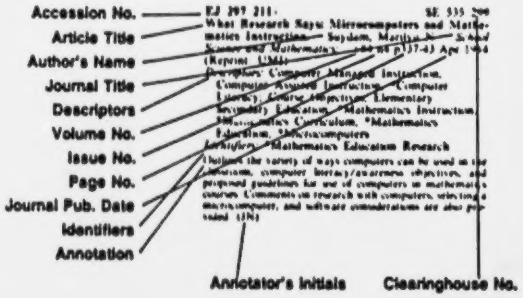

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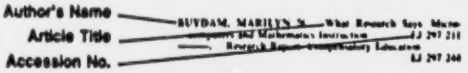

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Re: Opening ERIC Database

We here at EDRS have repeatedly been asked to come up with an effective method whereby all educational schools could gain entry into the ERIC Database-whether they are large, medium, or small. We are pleased to announce the development of a program that will ensure this goal that all schools, even those with limited funds, have access to this dynamic database.

This program is called the ERIC STARTER KIT. It will provide you with everything you need to access ERIC.

* All RIE Indexes on microfiche 1966-1986
* Complete collection of all RIE Document Resume Pages on microfiche 1966-1986
* Rapid access to the ERIC Database - Full Text
* Yearly updates of all RIE Indexes and Document Resumes
* Low profile Microfiche Viewer for detail viewing

We will provide rapid access to the actual database by making it just a free phone call away. First, with this program, any topic in ERIC can be quickly and inexpensively researched just by viewing the Title, Author, Subject, or Institution Indexes. In addition, a cross reference structure is provided by the RIE Descriptors and Identifiers.

Once a topic has been identified through the indexes, the Document Resume is referenced to summarize the contents of the document. In this way, the pertinence of the document can be determined.

This is only the first part of the ERIC STARTER KIT. After choosing the documents needed, we will provide two different options for rapid viewing of these documents.

* FIRST- We will include, with the ERIC STARTER KIT, a list of all institutions in your area which house an ERIC Database collection. It will provide you with the name, address, and telephone number for each one. In addition, this list will state which years of the ERIC Database are housed there and if all 16 clearinghouses are received or only individual clearinghouse data. In this way, you can quickly determine if any of these institutions have the documents needed.

* SECOND- We will personally process your requests for ERIC Documents immediately. For this rapid processing, we have installed a TOLL FREE NUMBER: 1-800-227-3742. We also have the capability to accept Visa or MasterCard. Requests received, whether by mail or over the phone, will be immediately processed to ensure prompt delivery.

Attachment 87-5c:
Page 2 of 4

ERIC® DOCUMENT REPRODUCTION SERVICE EDRS
3900 WHEELER AVE. ALEXANDRIA, VA 22304-5110 1-800-227-3742
OPERATED BY
COMPUTER MICROFILM CORP.
703-823-0500

In addition, the ERIC STARTER KIT comes with a light weight, durable microfiche reader for sharp detail viewing. This viewer is made of a light weight, space age plastic and provides full screen viewing capability. This is a complete, low cost ERIC package developed to quickly place the ERIC Database at your fingertips. We have noted time and time again, that institutions like your own need to effectively balance cost with assistance. The ERIC STARTER KIT has specifically been designed to solve this problem.

We feel that this plan is an excellent method for starting your ERIC collection. It is our hope that later you will install the ERIC Database in your library and become a full text ERIC center for your community. Until that time, we believe this plan provides a true, inexpensive, and workable approach for accessing ERIC. If I can be of further assistance - please do not hesitate to call or drop me a note.

Yours Truly,

Josh Retterer

Josh Retterer
Marketing Coordinator of EDRS

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OUTLINE & COST FOR THE ERIC STARTER KIT

*** ALL ERIC INDEXES: 1966 - 1986 ***

- RIE Cumulative AUTHOR Index
- RIE Cumulative SUBJECT Index
- RIE Cumulative INSTITUTION Index
- RIE Cumulative TITLE Index
- RIE Cumulative Descriptor Usage Report
- RIE Cumulative Identifier Usage

*** Complete Set of all RIE Document Resumes 1966-1986 ***

** Detailed List of ERIC Database Collections in Your Area **

PLUS

*** New Micro Design Reader #425 ***

- 1 year warranty
- color: earth tone brown and tan
- weight: 12 lbs.
- blue, green or gray non-glare screen

Total Cost $389.00 1966-1986

YEARLY UPDATES

Each year we will completely update the ERIC Starter Kit with this option. Through it an institution will be able to incorporate each new year's collection. All six of the indexing sets will be completely replaced. This will ensure that the just completed year's data is correctly catergorized within each index set.

The document resume file set will not be replaced but updated. This set's information is filed chronologically by E.D. #. Therefore only the microfiched copies of the just completed year's data will be sent out - to be inserted at the end of the previous year's data. An example for this would be that the 1987 document resume releases should be filed directly after the 1986 releases.

By replacing all six of the indexing sets and annually updating the document resumes file - A complete, low cost method is now provided for, in staying up to date with the growing ERIC Database. Please note shipping charges are included in this program.

Yearly cost - $93.00

IMPORTANT INSTRUCTIONS FOR ORDERING ERIC STARTER KIT

Payment may be made using any of the following methods:

- enclose check or money order payable to EDRS
- by MasterCard or Visa using EDRS toll free number: 1-800-227-3742
- U.S. customers may issue an authorized original purchase order
- please note that shipping charges are included in purchase price

****

EDRS - RAPID ACCESS TO ERIC

- Quick access to ERIC's full text Database with our toll free number: 1-800-227-3742
- Entire ERIC Database available in microfiche or paper format
- EDRS accepts MasterCard and Visa over the phone
- Or written requests with check or money order payable to EDRS
- Processing done immediately upon receipt of order and payment

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ERIC: a Brief Description

The Educational Resources Information Center (ERIC) is a decentralized nationwide network, sponsored by the National Institute of Education (NIE), and designed to collect educational documents and to make them available to teachers, administrators, researchers, students, and other interested persons. ERIC publishes a monthly abstract journal, *Resources in Education (RIE)*, which announces all documents that are acquired by ERIC and that pass its selection criteria. ERIC attempts comprehensive coverage of recently completed significant documents dealing with education.

- Manuals
- Handbooks
- Curriculum Materials
- Conference Papers
- Proceedings
- Bibliographies, Annotated Bibliographies
- Legislation and Regulation
- Tests, Questionnaires, Measurement Devices
- Vocabularies, Dictionaries, Glossaries, Thesauri
- Statistical Compilations
- Taxonomies and Classifications
- Dissertations
- Research Reports, Technical Reports
- Program Project Descriptions
- Opinion Papers, Essays,
- Monographs, Treatises
- Speeches and Presentations
- Evaluation Studies
- Feasibility Studies
- State of the Art Studies
- Instructional Materials
- Syllabi
- Teaching Guides
- Resource Guides

Your Keys to the ERIC Data Base

Resources in Education Cumulative Institution Index

This index lists the title of the ERIC documents under the institution responsible for their development. An alphabetical listing by the name of the university, institution, agency, association, etc., is also provided.

RIE Cumulative Descriptor Usage Report

Descriptor Usage Report is a concise cumulative index of the descriptors (index terms from the Thesaurus) used in Resources in Education.

RIE Cumulative Identifier Usage Report

RIE Identifier Usage Report is a concise cumulative index of the identifiers (additional identifying terms) used in Resources in Education.

These Usage Reports contain all the terms used and list the ED numbers for the documents to which they were assigned. Major descriptors or identifiers are indicated by an asterisk. The fiche also provide the only printed access to minor identifiers.

RIE Cumulative Title Index

Resources in Education Cumulative Title Index is a single alphabetical listing of all ERIC document titles from the beginning of the ERIC system.

Each citation includes level of availability, publication date, ED number, number of pages and/or number of microfiche.

RIE Cumulative Author Index

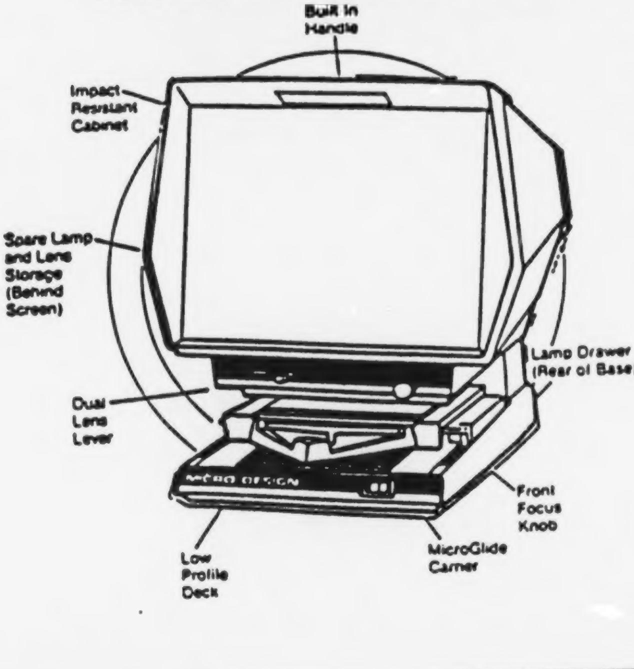
Resources in Education Cumulative Author Index provides access by author, including secondary authors when noted. If there are three or more authors, only the first is listed by name. For each author, title, the level of availability, the ED number, number of pages and/or microfiche are cited.

The cumulative author and title indices, when used in conjuction with one another, are invaluable ERIC search aids.

Resources in Education Cumulative Subject Index

This index lists the titles of documents under the major subject terms that have been assigned to characterize their contents. The subjects which conform to those in the Thesaurus of ERIC Descriptors, are in alphabetical order and cumulative.

MICRO DESIGN



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Attachment 87-6:
Page 1 of 2

UMI ARTICLE CLEARINGHOUSE

Photocopies of most of the articles indexed in ERIC are available from UMI Article Clearinghouse. Those articles available are indicated by the appearance of "Reprint: UMI" in the citation.

Through the Clearinghouse, UMI offers photocopies of articles from more than 10,000 periodicals including the majority of those indexed in ERIC. In addition to education, our document delivery service covers many other subject areas including: business and management; humanities and social sciences; and science and technology. We provide copyright clearance on every article we supply, and we guarantee shipment by first class mail within 48 hours. A variety of rush delivery services are available as well.

You can order articles electronically over 11 different online systems (including BRS, DIALOG and OCLC), as well as by mail and by telephone. The Clearinghouse service is designed to make it quick, easy, efficient and inexpensive for you to get the information you need.

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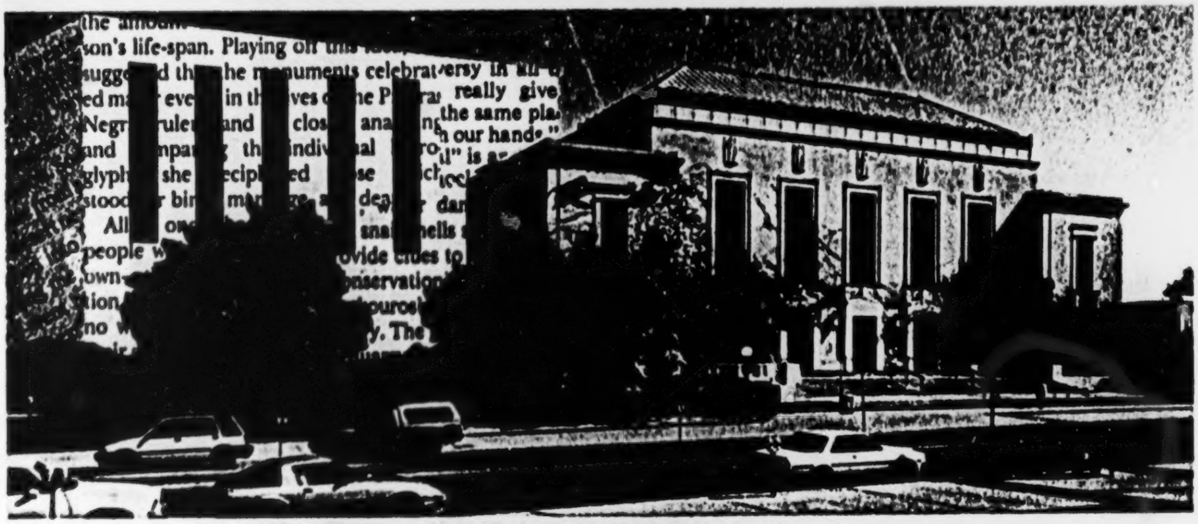

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We expand the range of titles you're able to offer your academic patrons with our collection of more than 10,000 scholarly and technical journals, popular magazines, conference proceedings and transactions, newspapers, and government documents.

Subject areas are as diverse as your information needs. They include arts and humanities, business and management, education, life sciences, law, medicine, and physical sciences.

We also offer most of the titles cited in such major databases and indexes as *ABI/INFORM, Abridged Index Medicus, Applied Science and Technology Index, Current Index to Journals in Education*, and the *Readers' Guide to Periodical Literature*. Retrospective coverage is available for the majority of our titles, some from the very first issue.

If this sounds comprehensive to you, you're right; the Clearinghouse has the broadest coverage of any commercial document delivery service, *anywhere*. And UMI's licensing agreements ensure copyright clearance, too.

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We know the time pressures you face every day: students and faculty want information and they want it *now*. So we fill and ship your orders by first-class mail, within 48 hours of their receipt. Can't wait that long? No problem. At your request, we'll cut our turnaround time in half and mail your order by overnight courier or send it via our digital telefacsimile service, Artifax.

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Our price per article is truly affordable—just $5.50 to $7.50, depending on the number of articles you order annually. (Orders requiring special handling or delivery are, of course, priced slightly higher.) There's never a per-page charge; 10 pages or 25, you pay the same base rate. Discounts are available to regional and national network users.

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ERIC DIGEST

NEW ACCESS POINTS TO ERIC - CD-ROM VERSIONS

Since SilverPlatter began delivering its ERIC database product on CD-ROM in August 1986, there have been many new developments in access to ERIC on CD-ROM. This digest will review three products and present information for comparison. No attempt will be made to recommend any one product. System features and capabilities vary, and individual user needs must be taken into consideration when evaluating for purchase.

The mass storage capabilities of compact disc-read only memory (CD-ROM) will enable libraries and information centers to offer in-house access to large databases formerly available only in print or online. Each CD-ROM disc holds approximately 550 megabytes of data, the equivalent of about 220,000 printed pages or over 1,500 floppy disks. The entire ERIC database of more than 600,000 citations, with its 20 years of print indexes, fits on three CD-ROM discs.

ADVANTAGES OF CD-ROM USE

Online services can be costly and those costs are not easily estimated. In budget-based institutions such as libraries, approximate costs are difficult to manage. An obvious advantage in the acquisition of CD-ROM databases is the ability for institutions to more accurately predict the costs of offering access to databases, previously estimated in the online environment. Another is, that, given the nature of the CD-ROM retrieval software, end-user searching can be provided and promoted. The more the CD-ROM is searched, the lower the cost per search. This activity is useful in establishing information literacy as well as computer literacy.

DISADVANTAGES

The most often cited disadvantage to CD-ROM use is the fact that, at this time, each work station must have its own CD-ROM drive and only one user can have access at a time. This issue is more complicated than it appears on the surface, however. A book may only be used by one person at a time, but, in the case of a periodical index, there are ordinarily several volumes available for use. If you feel that your institution would require more than one workstation, an additional microcomputer, CD-ROM drive, and database disc(s) must be provided.

The other frequently cited disadvantage has to do with the frequency of update. The ERIC CD-ROM systems currently available are updated quarterly. Near the end of an update period, one would be missing the most recent 3 months of information. Depending on the urgency of the information need, this might necessitate the supplementing of the CD-ROM search with an online search.

ERIC CD-ROM SYSTEMS

Three vendors are currently delivering or testing CD-ROM versions of the ERIC database. Descriptive information for each of these products is presented here, followed by a comparison chart. Prices are subject to change, but are provided for reference.

DIALOG OnDisc ERIC

DIALOG Information Services, Inc.
3460 Hillview Avenue
Palo Alto, CA 94304
800-3-DIALOG
415-858-3785

The Database

The database for OnDisc ERIC integrates both ERIC print indexes, Current Index to Journals in Education (CIJE) and Resources in Education (RIE), in two forms. The current file contains records from 1981 to the present on one disc and the complete file contains the entire database from 1966 to the present on three discs. The archival material is not available separately.

The Software

The DIALOG OnDisc Manager search software has two modes of use, DIALOG command language for those already familiar with the DIALOG system, and easy menu mode for novice users. The command mode makes use of the standard search protocols used in the online system, while the menu mode walks users through a series of well-designed steps from selecting the type of search desired (author, subject, thesaurus terms, text words, publication type, etc.) to printing or downloading the resulting records.

The DIALOG OnDisc Manager also allows for online searching of DIALOG databases through the DIALOGLINK communications package. An OnDisc search may be automatically updated in the most current portion of online ERIC, or another DIALOG database may be searched through a DIALOG password.

OERI
Office of Educational Research and Improvement
U.S. Department of Education

This publication was prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract no. 400-85-0001. The opinions expressed in this report do not necessarily reflect the positions or policies of OERI or ED.

The Hardware

The following hardware is required to run DIALOG OnDisc ERIC:

- IBM PC or compatible microcomputer;
- IBM PC DOS 2.0 or higher;
- 384K RAM (minimum required, 640K recommended;)
- Hard storage disk with at least one megabyte of free space;
- Philips CM 100 or Hitachi CDR-1502S CD-ROM reader with controller card;
- Hayes-compatible modem to make use of DIALOGLINK communications software.

DIALOG has arranged with several vendors to provide for the lease and/or purchase of any of the hardware needed to run DIALOG OnDisc.

Notable Features

For search strategy assistance in the Easy Menu mode, the Thesaurus of ERIC Descriptors is available for searching through OnDisc. One can browse through the related term displays and directly select applicable thesaurus terms for a complete search strategy.

Retrieved records can be sorted by author, title, publication year, journal name, or corporate source in the Easy Menu mode. Records may also be transferred to disk for further manipulation with a word processing program.

Finally, the inclusion of DIALOGLINK provides users with the ability to transfer to the online system to execute a DIALOG OnDisc search in the portion of the database not included on the CD-ROM, which enables users to cover the entire database efficiently.

OCLC Search CD450 for Education

Online Computer Library Center
6565 Frantz Road
Dublin, OH 43017-0702
614-764-6000

The Database

The Search CD450 education package includes three databases on five separate discs. The current database, from 1982-present includes RIE and CIJE in two separate files on one disc. Remaining discs include CIJE, 1969-1981, RIE, 1977-1981, RIE, 1967-1976 and Education Materials in Libraries, a subset of the OCLC Online Union Catalog containing education-related bibliographic records.

The current ERIC disc is available by quarterly or annual subscription. The archival discs are available as one-time purchases, and the Education Materials in Libraries is updated annually.

The Software

The Search CD450 software makes use of windows to separate the various search functions. All searches are entered into the query window. Searches may be modified by the use of fields, which are available for viewing through the use of a function key. Single words are not searched as parts of multi-word descriptors in a basic search. The basic index may be browsed and search terms may be copied into the query window using the tab key. Thesaurus terms must be searched separately from other text words.

All records retrieved are sorted before being displayed on the screen according to the number of times the search term appears in the record, a relevance measure. The record in which the term appears most often will display first automatically. This is the only sort feature available.

The System Administration Module (SAM) allows the system operator, not the end-user, to program which fields will be searched with a particular qualifier and what fields will be displayed in each record display formats, and provides for the creation of locally written help screens. SAM also allows the system operator to control for the number of records that may be printed or stored with a single command, and where the records will be saved if users choose to store rather than print search results.

The Hardware

The following hardware is required to run OCLC Search CD450:

- IBM PC XT or AT or OCLC M300 workstation;
- minimum of 512K RAM;
- 10 megabyte hard disk or hard card;
- CD-ROM reader (manufacturers not specified in print information, tested at ERIC on Hitachi CDR1502S.)

OCLC will facilitate lease/purchase arrangements for the above equipment.

Notable Features

The ability for the system operator to alter record structure and search protocols allows for customization of the program using the System Administration Module. The help screens may be tailored to the level of the user if they do not meet institutional requirements.

All help screens are accessible through a menu interface. The user must decide which type of help is required, however.

The Education Materials in Libraries database provides for the searching of a literature base which complements the documents and journal articles found in ERIC.

The sorting of records according to search term occurrence provides a predetermined relevance judgement. Users, however, are accustomed to records in author, date, or other order and may need some time to get used to this new arrangement.

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SilverPlatter ERIC

SilverPlatter Information, Inc.
37 Walnut Street
Wellesley Hills, MA 02181
617-239-0306

The Database

The current database disc for ERIC on SilverPlatter integrates both CIJE and RIE from 1981 through the current quarter in one file. A two disk retrospective set includes the years 1966-1975 and 1976-1982. Special pricing has been arranged for those ordering the archival set and a current, quarterly subscription. The current disc is also available on an annual update basis.

Other databases available through SilverPlatter are: PsycLIT (Psychological Abstracts), A-V Online (NICEM database), LISA (Library and Information Science Abstracts), AGRICOLA (National Agriculture Library), SOCIOFILE (Sociological Abstracts), Corporate and Industry Research Reports (CIRR), and OSH-ROM (Occupational Safety and Health Information). Several other databases will become available in 1987.

The Software

The SilverPlatter program runs from a floppy disk and no hard disk is required. User training is provided through an extensive series of help screens. Field searching is available, with field labels displayed as a function key command. The basic index may be displayed, with postings for individual terms listed, but terms must then be typed in for searching.

The Hardware

SilverPlatter has produced a list of tested equipment configurations on which their system will run. Basic requirements are:

- IBM PC or compatible microcomputer;
- 512K RAM;
- PC-DOS or MS-DOS version 2.0 or higher;
- CD ROM drive, (Hitachi, Philips or SONY currently supported.)

SilverPlatter will facilitate the lease or purchase of Hitachi or Philips compact disc drives.

Notable Features

SilverPlatter is the only one of the three systems described here that does not require hard disk storage. The program may be booted from hard disk, if desired.

The instructional information available to users is extensive, with function keys and on-screen menus used to provide help information.

Also, the availability of several other databases for use with this program makes it an attractive acquisition.

Prepared by Pamela W. McLaughlin,
User Services Coordinator, ERIC/IR

COMPARISON OF CD-ROM ERIC PRODUCTS

Features	DIALOG	OCLC	SilverPlatter
Current Disc	1981-present RIE and CIJE in single file	1982-present RIE and CIJE as separate files	1981-present RIE and CIJE as single file
Archival Discs	1966-present on 3 discs, RIE and CIJE; backfile not available separately.	CIJE 1969-1981 RIE 1967-1976 RIE 1977-1981 on separate discs	RIE and CIJE 1966-1975 and 1976-1982 on 2 discs.
Hardware	IBM PC or compatible; 384K RAM required, 640K recommended; hard disk with 1MB free space; Hayes-compatible modem for use with DIALOGLINK.	IBM PC XT or AT or OCLC M300 workstation; 512K RAM, 10MB hard disk free.	IBM PC or compatible; 512K RAM.
CD Drives	Philips or Hitachi	Philips or Hitachi	Philips, Hitachi or SONY
Prices	$750-current file with quarterly update; $1450-complete file with quarterly update.	Introductory prices: $299-member; $349-nonmember for current file with quarterly updates; $1199 member; $1399-nonmember for complete file with quarterly update.	$650-current file, quarterly updates; $390-current file, annual updates; $900 archival set, 2 discs; $1,200-complete starter set with quarterly update of current file.

For further information on any of these products, contact the vendor, or this clearinghouse. It is also advisable to make contact with other organizations of similar character who are currently making use of the system you may be considering for purchase for comparative information.

Attachment 87-7b:
Page 1 of 2

FEATURE	DIALOG ONDISC	OCLC CD450	SILVERPLATTER
SCOPE/COST/TERMS			
Current Disk	CIJE and RIE 1981-present $950/yr. license quarterly updates.	CIJE and RIE 1982-present $675 ($600 member) quarterly updates. **Introductory price $349 ($299 member) quarterly updates. $350 ($300 member) annual update only. Educational Materials in Libraries: An OCLC subset $350 ($300 member) annual update only.	CIJE and RIE 1983-present $650 for quarterly updates. $390 for annual update only.
Archives	3-disk set covers 1966 to present $1650 for Yearly License.	CIJE 1969-81 RIE 1977-81 RIE 1967-76 $350 ($300 member) per disk One-Time Purchase.	1966-82 on 2 disks $900 per set One-Time Purchase **$250/year license fee if current subscription not purchased.
"Package Deals"		Current subscription and archival set $2075 ($1800 member) **Introductory price $1399 ($1199 member).	Current subscription and archival set $1200.
Policy regarding superceded disks	Mandatory return.	Unknown.	Mandatory return.
FEATURE **HARDWARE REQUIREMENTS**	**DIALOG ONDISC**	**OCLC CD450**	**SILVERPLATTER**
	IBM PC or compatible.	OCLC M300XT, IBM PC XT or PC AT or compatible.	IBM PC or compatible.
	384K (640K recommended) Hard disk with at least one megabyte of free space	512K. 10MB fixed disk drive or hard card.	512K.
	Hitachi or Philips CDROM drive, cable, and controller card	Hitachi, Philips, or Sony CDROM drive, controller card, and cable	Hitachi, Philips, or Sony CDROM drive, controller card, and cable
	Printer (optional) Hayes-compatible modem or certain other models and telephone line for online connection (opt.)	Printer (optional).	Printer (optional).
	Color is supported but monochrome monitor will also work.	Monochrome.	Monochrome.

Tables extracted and reprinted, with permission, from: "ERIC on CDROM: A Comparison of DIALOG OnDisc, OCLC's Search CD450, and SilverPlatter", *ONLINE*, September 1987, pp. 42-54.

FEATURE	DIALOG ONDISC	OCLC CD450	SILVERPLATTER
LEASE/PURCHASE OPTIONS	Purchase of Philips CDROM reader, controller card and cable: $740 Complete programs for purchasing, leasing, installation, and maintenance are available.	Purchase of Hitachi CDROM reader, controller card and cable: Price not yet set.	Purchase of Hitachi unit with 90-day warranty; $680 paid in advance, $750 by purchase order; with 1 year warranty: $780 prepaid, $850 by p.o. 2-year lease/purchase (prepaid or p.o.) $500/yr. Purchase of Philips unit with 90-day warranty: $760 paid in advance, $830 by purchase order; with 1 year warranty: $860 prepaid, $930 by p.o. 2-year lease/purchase (prepaid or p.o.) $500/yr. *Shipping costs stated at $25 per drive.
SOFTWARE CONSIDERATIONS			
Choice of search modes	Yes	No	No
Free-text searching	Yes	Yes	Yes
Field qualification	Yes	Yes	Yes
Proximity searching	Yes	Yes	Yes
Boolean operations	Yes	Yes	Yes
Index display	Yes	Yes	Yes
Select terms from index without rekeying	Yes	Yes	No
Ondisk thesaurus	Yes	No	No
Direct record access	No	Yes	Yes
Display formats	4 Predefined	5 Predefined	Predefined or user may define by fields
Sort search results	Yes	No	No
Download to disk	Yes	Yes	Yes
Save search strategy when exchanging disks	Yes	Unknown	Yes
Connect to online service	*Yes	No	No
DOCUMENTATION AND CUSTOMER SUPPORT			
Printed manual	Yes	Yes	Yes
Printed manual WITH INDEX	No	No	Yes
Quick reference chart	Yes	Yes	No
Tutorial	No	No	Yes
Context-specific online help	Yes	Yes	Yes
Toll-free telephone support	Yes	Yes	Yes

* In DIALOG Command Mode

DIALOG OnDisc ERIC, the first database in the Dialog family of CDROM products, provides immediate access to abstracts of articles published in over 700 educational journals, and thousands of research reports, evaluation studies, curriculum guides, and lesson plans collected by the U.S. Department of Education.

DIALOG OnDisc ERIC corresponds to two printed indexes: Resources in Education (RIE), which covers significant educational documents, and Current Index to Journals in Education (CIJE), an index to more than 700 periodicals of interest to every segment of the educational community. The complete thesaurus of ERIC descriptors is also searchable in DIALOG OnDisc ERIC.

The ERIC database contains a wide variety of information covering: adult and vocational education, teacher education, reading and communication skills, handicapped and gifted children, tests, measurement and evaluation, higher education, and information resources.

Unlimited searching for a wider audience

The capability to access information locally and at a fixed cost means that libraries and educational institutions can provide wide-ranging, education-related information to the entire academic community. Using personal computer workstations in libraries, students, faculty members and others in the community can search DIALOG OnDisc ERIC for themselves. And searching couldn't be easier or faster – the DIALOG OnDisc Manager software retrieves information extremely quickly, with retrieval speed and power comparable to DIALOG online services. Time-consuming literature and document searches previously done manually by students and researchers now take only minutes with DIALOG OnDisc ERIC.

Produced by DIALOG, the world's largest online databank

DIALOG OnDisc ERIC is produced by Dialog Information Services Inc., a subsidiary of Lockheed Corporation. Dialog has offered online access to references, abstracts or complete text of published literature since 1972. Dialog is the acknowledged world leader in electronic information distribution, with a collection of more than 270 databases used by 80,000 customers in 76 countries. You can even search DIALOG OnDisc ERIC the same way you search DIALOG online, but the information is retrieved locally via your personal computer from a CDROM disc in a CDROM reader. Because the search techniques are the same, you can learn about searching DIALOG OnDisc ERIC at standard DIALOG training seminars. You can even practice on CDROM at seminars held in our field offices.

DIALOG OnDisc ERIC – current only or complete file

DIALOG offers two different DIALOG OnDisc ERIC products: you can license only current ERIC information from 1981 to the present on one disc, or the complete ERIC file, 1966 to the present, on three discs. The current disc is updated quarterly and automatically shipped to all subscribers. After receiving your updated current disc, you simply send the old disc back to Dialog. All updates and redesigned archive discs will be included with your subscription at no extra charge or separate purchase price. DIALOG OnDisc ERIC includes DIALOG's own retrieval software – the DIALOG OnDisc™ Manager – which offers two searching options, the DIALOG command language and a menu option, making it fast and easy for both experienced DIALOG searchers and complete novices to find the information they need.

The best of both worlds

DIALOG OnDisc Manager software includes communications software so that you can take advantage of the full power of DIALOG OnDisc ERIC when teamed with searching DIALOG online. If you want to access more current ERIC information between quarterly updates, you simply save your CDROM search and switch to DIALOG online for the most up-to-date information available (at current online rates). If you only subscribe to the current disc, you can access older information online. You can also take advantage of many DIALOG online databases such as PsycInfo, Exceptional Child Education Resources, Magazine Index,™ and Social Scisearch® that complement ERIC.

A yearly prepaid license fee covers your unlimited use of DIALOG OnDisc ERIC. As a trial offer, you may terminate your agreement within 90 days of contract acceptance for a prorated refund of the yearly license fee if you are not completely satisfied with the product.

DIALOG OnDisc subscriptions come with complete documentation and toll-free telephone hotline support for searching assistance 24 hours a day, 5 days a week, and on Saturdays from 10 am to 6 pm Eastern time.

Required equipment for DIALOG OnDisc ERIC

You may already own some of the equipment needed for DIALOG OnDisc ERIC. DIALOG OnDisc ERIC requires the following equipment:

- IBM PC or compatible personal computer and IBM PC DOS Version 2.0 or higher.
- 384K RAM (minimum required, 640K RAM recommended).
- Hard storage disk with at least one megabyte of free space.
- Philips CM-100 reader and Philips controller card. Digital Equipment Corporation RRD-50EA Reader (includes controller card). Any Hitachi reader that uses a CD-IF13 or CD-IF125A2 controller card.
- A Hayes-compatible modem (or certain other models) is necessary to take advantage of online searching.

If you don't have a CDROM reader, you can purchase a Philips CDROM reader through a special Dialog/Philips arrangement. Or, you can lease an entire personal computer workstation with a CDROM reader through special arrangements Dialog has made with an equipment vendor.

Getting started

To order, refer to the price list below to complete the DIALOG OnDisc order form and license agreement enclosed in this package.

If you would like additional information or a demonstration, call Dialog Marketing at 800-3-DIALOG or 415-858-3785.

DIALOG OnDisc ERIC Price List

ERIC SUBSCRIPTION OPTIONS	YEARLY LICENSE FEE (Prepaid) LIST PRICE	PRODUCT CODE
Current file only (1981 to present, 1 disc)	$ 950	2001101-6
Complete file (1966 to present, 3 discs)	$1650	1001101-5

DIALOG OnDisc ERIC service includes disc(s), quarterly CDROM updates, DIALOG OnDisc™ Manager and telecommunications software, documentation, telephone searching assistance hotline, and shipping. Contact Dialog Marketing for information on prices for orders of two or more products.

TRIAL OFFER

If you are not completely satisfied with your DIALOG OnDisc product, you may terminate the agreement within 90 days of contract acceptance for a pro-rated refund of the yearly license fee.

OTHER DOCUMENTATION	PURCHASE PRICE	PRODUCT CODE
Guide to DIALOG Searching (Text only) (Requires binder below)	$25	0920007-8
Two-inch Binder	$10	0950001-4

U.S. prices only. Other prices apply outside the U.S.

Documentation handling fee of $5 per order waived for orders placed through DIALORDER. For expedited handling of document orders within the U.S. add $25; for expedited handling outside the U.S. add $50. Prices do not include any applicable local taxes.

EQUIPMENT FROM OTHER SUPPLIERS	PURCHASE PRICE	PRODUCT CODE
Philips CDROM reader (model CM-100), controller card with cable, and disc security lock	$740	12SP0011

Dialog will facilitate your purchase of Philips CDROM readers directly from the manufacturer at this special price. Price includes shipment to continental U.S. or customs broker and 90-day warranty. Make out a separate check or P.O. to Laser Magnetic Storage, 200 Park Ave., Suite 5501, New York, New York 10166, Attn: Rob Van Eijk.

Please indicate quantity and price of CDROM readers on order form and attach a separate check or purchase order to it and send to Dialog (do not send it to Laser Magnetic Storage). If not prepaid, payment is due within 30 days of invoice date. You may return equipment in complete and good condition and original packaging within 30 days from invoice date at no charge if not fully satisfied.

WORKSTATIONS

A complete program for equipment acquisition, installation, and maintenance is available by arrangement with a supplier chosen by Dialog. Workstations may be purchased or leased. The workstation includes an IBM PC-compatible, color monitor, fixed disk, modem, CDROM reader, and a printer. Equipment installation and ongoing maintenance from the supplier are automatically included with the leased workstations and are optional for purchased workstations. Contact Dialog Marketing for complete details.

Prices subject to change without notice. To order, please return your completed order form and license agreement to Dialog or call Dialog Marketing for more information at 800-3-DIALOG or (415) 858-3785.

Dialog Information Services
Customer Administration
3460 Hillview Ave.
Palo Alto, CA 94304

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INFORMATION SERVICES, INC.

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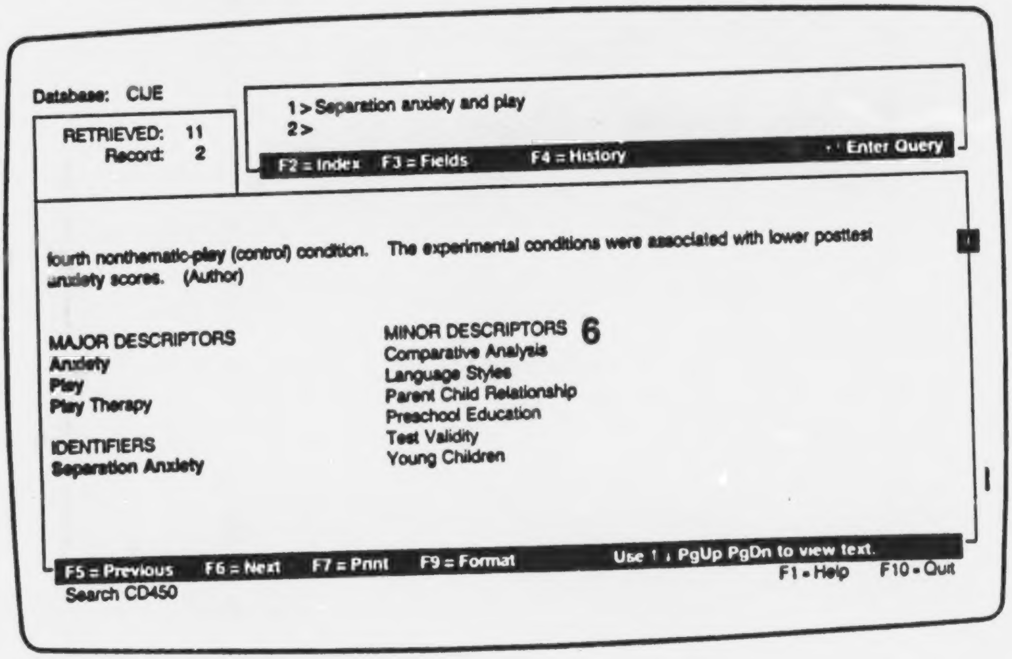
**OCLC
Reference Services**

Fact Sheet
June 1987

OCLC Presents ERIC on CD-ROM



```
Database:  CIJE          1 > Separation anxiety and play
                         2 >
  RETRIEVED:  11
     Record:   2         F2 = Index   F3 = Fields    F4 = History        ·· Enter Query

fourth nonthematic-play (control) condition.   The experimental conditions were associated with lower posttest
anxiety scores.   (Author)

MAJOR DESCRIPTORS                        MINOR DESCRIPTORS  6
Anxiety                                  Comparative Analysis
Play                                     Language Styles
Play Therapy                             Parent Child Relationship
                                         Preschool Education
IDENTIFIERS                              Test Validity
Separation Anxiety                       Young Children

F5 = Previous   F6 = Next   F7 = Print   F9 = Format      Use ↑ ↓ PgUp PgDn to view text.
                                                          F1 = Help     F10 = Quit
Search CD450
```

Search CD450: Education

The OCLC Search CD450™ titles in education are the first in a series of OCLC reference databases on compact disc. Bibliographic and citation databases obtained from a variety of sources will be supplemented by specially created, subject-related subsets of the OCLC® Online Union Catalog. Each Search CD450 offering will use the same software, allowing your patrons and staff to access bibliographic information for many subject areas through one familiar system.

The Search CD450: Education package includes three databases on five separate compact discs for your library's use:

1. ***ERIC database.*** 1982–present. (Quarterly or annual subscription)
   Includes two separate files:
   - ***Current Index to Journals in Education (CIJE),*** 1982-present
   - ***Resources in Education (RIE),*** 1982-present
2. ***Current Index to Journals in Education.*** 1969–1981
3. ***Resources in Education.*** 1977–1981
4. ***Resources in Education.*** 1967–1976
5. ***Education Materials in Libraries.*** A subset of the OCLC Online Union Catalog containing education-related bibliographic records representing all types of materials. (Annual subscription)

The discs are available individually, in combination, or in special packages. (For order and price information, see back page.)

ERIC on CD-ROM
June 1987

OCLC Reference Services

Titles in Education

ERIC Databases

The ERIC databases consist of the Current Index to Journals in Education (CIJE), which includes indexes and abstracts for articles in more than 750 education-related journals, and Resources in Education (RIE), which contains indexes and abstracts for many types of documents pertaining to education.

Subjects covered include child development, classroom techniques, reading, science, social studies, counseling, career education, adult education, rural and urban education, teacher education, higher education, testing, educational administration, special education, and more.

These databases are created and produced by the Educational Resources Information Center (ERIC) of the National Institute of Education, United States Department of Education.

Education Materials in Libraries

The Education Materials in Libraries database is a subset of the OCLC Online Union Catalog consisting of bibliographic records pertaining to education. All formats and types of materials are included. The bibliographic records are chosen based on a combination of Library of Congress and Dewey Decimal classification numbers and subject headings.

Search CD450 System

General Description

OCLC's new reference product, the Search CD450 system, provides access to reference databases stored on compact discs. Compact discs accommodate large files of information that can be retrieved using a microcomputer, a CD-ROM (Compact Disc Read Only Memory) reader, and OCLC search software. Compact disc technology provides local access to information, reduces time-based telecommunications and search charges, and uses a very reliable medium for information storage. With the new OCLC Search CD450 system, your patrons and staff will have affordable in-house access to many reference databases.

Features and Advantages

The OCLC Search CD450 system includes sophisticated, easy-to-use search software that will allow your patrons and staff to take full advantage of reference databases in your library. In addition to local data access, the Search CD450 system allows local profiling so your library staff can alter options for searching, display, and printing.

Searching. These flexible searching techniques may be used alone or in complex search statements: single words, phrases (with assumed adjacency of the terms in the phrase), AND, OR, NOT and ADJacency operators, right truncation, range searching, limitation of search to one or more specific fields, and retrieval by a controlled vocabulary (descriptors, subject headings). Search progress is tracked, so long searches can be detected and canceled if necessary.

Index. The index-browsing function can be invoked at any time, even while a search is being entered. Indexed terms are displayed with the number of occurrences in the database. Words in the index can be transferred directly to the search statement.

Search History. The last twenty searches in the current search session, including the number of records retrieved, can be displayed at any time. Previous search results can be easily selected and incorporated in a new search.

User Interface. The OCLC Search CD450 interface is especially designed for patrons, making the steps and options as clear as possible. The basic user options are displayed on the screen at all times as function key values. The straightforward options prevent your patrons and staff from getting lost in complex menu mazes and allow them to select the next step. The system includes context-sensitive help screens.

Printing and Saving. You may print records or save them on diskette or hard disk. Your library staff profiles the system to determine which drive is used for saved records. The downloaded records are in ASCII files that can be used with other software to create reports and bibliographies.

Relevancy. The Search CD450 system displays the most relevant citations first. Relevancy is calculated by counting the number of times the search terms appear in each record retrieved. Records are displayed with the highest scoring record first. The scoring results can also be displayed in a graph, allowing the user to see at a glance the range of scores in the set of retrieved records.

OCLC Reference Services

ERIC on CD-ROM
June 1987

ERIC on CD-ROM

Pricing Information

	Introductory Price Through Sept. 1987		Regular Price	
	Member	Other	OCLC Member	Other
ERIC Current Discs:				
ERIC database, 1982-present (Quarterly Subscription) Includes: - Current Index to Journals in Education (CIJE), 1982-present - Resources in Education (RIE), 1982-present	$ 299	$ 349	$ 600	$ 675
ERIC database, 1982-present (Annual Subscription)			$ 300	$ 350
ERIC Backfile Discs:				
Current Index to Journals in Education, 1969–1981			$ 300	$ 350
Resources in Education, 1977–1981			$ 300	$ 350
Resources in Education, 1967–1976			$ 300	$ 350
OCLC Subset Disc:				
Education Materials in Libraries: An OCLC subset (Annual Subscription)			$ 300	$ 350
Special Offers—Through Sept. 1987:				
Special Introductory Package A Includes: - ERIC database, 1982-present (Quarterly subscription) - Current Index to Journals in Education, 1969–1981 - Resources in Education, 1977–1981 - Resources in Education, 1967–1976 - Education Materials in Libraries	$1199	$1399	$1800	$2075
Special Introductory Package B (with Equipment) Includes: a three-year quarterly subscription to ERIC database [1982-present] and a compact disc reader	$1799	$1999		
CD-ROM Readers:				
Philips CM100L/153 locking compact disc reader and controller board with cable			$ 865	$ 865
Hitachi 2500 compact disc reader with case for external use, controller board, and cable. Available with optional maintenance after August 1, 1987			$ 825	$ 825

Pub. No. 403a
8706/3239-5M, OCLC

OCLC Reference Services

ERIC on CD-ROM
June 1987

Pricing

Member prices are available to full-cataloging or tapeloading members of OCLC and to selective users under the OCLC Group Access Capability and to OCLC LINK users. Subscribers belonging to an institution, where the institution has an OCLC-member library, may also subscribe at OCLC-member rates.

All prices include shipping and handling costs, F.O.B. shipping point, for North American destinations. For non-North American destinations, subscribers should contact OCLC for additional shipping charges.

Each Order Includes

- The compact disc(s) comprising the subscription ordered
- The OCLC Search CD450 Software
- Search CD450 software maintenance for the duration of the subscription, as indicated in the Search CD450 Subscription Terms
- Telephone support from your participating network or from OCLC through the User Contact Desk (UCD). You can reach the UCD at these toll-free numbers:

  National: 800-848-5800
  Ohio: 800-282-7306

- The Search CD450 documentation (User Guide/System Guide set in binder; softcover User Guide; and Reference Guide). The number of sets of documentation supplied will be based on the highest number of subscriptions ordered (e.g., if three ERIC quarterly subscriptions and two CIJE 1969-1981 discs are ordered, three complete sets of documentation will be supplied). Subscribers to one Introductory Package A will receive one complete set of documentation.

System Configuration

The OCLC Search CD450 system will run on

- An OCLC M300XT™ Workstation or IBM® PC-XT™ or PC AT™, each with at least 512K random-access memory (RAM)
- A hard-disk drive or hard card
- A CD-ROM reader, currently Philips, Hitachi, or Sony. (Call if you have a CD-ROM reader not listed). Note that the CD-ROM reader requires a slot in your microcomputer for its controller board

CD-ROM Readers Offered

OCLC offers the Philips CM100L/153 CD-ROM reader to facilitate use of the Search CD450 system. This reader is a single, stand-alone, top-loading unit and is fully compatible with the OCLC M300XT Workstation, as well as with the IBM PC XT and PC AT microcomputers.

The CD-ROM reader offered as part of Introductory Package B is the Hitachi 1502S, or, at OCLC's discretion, the Philips CM100L/153 or the Hitachi 2500 with case for external use. The Hitachi 1502S is a single, front-loading unit.

To Order

Fill out and sign the Search CD450 Order Form and return it to your participating network or to OCLC. For copies of the OCLC Search CD450 Order Form, contact your participating Network Office or call OCLC at these telephone numbers:

- National: 800-848-5878
- Ohio: 800-848-8286

For More Information

For more information about the OCLC Search CD450 system and other OCLC reference services, contact your participating Network Office or call OCLC.

OCLC is a registered trademark and Search CD450 and M300XT are trademarks of OCLC Online Computer Library Center, Inc.
IBM is a registered trademark and PC XT and PC AT are trademarks of the International Business Machines Corporation.

Search CD450: Education is the first in a series of OCLC reference databases on compact disc.
Available soon:
Search CD450: Agriculture (AGRICOLA)
Search CD450: Science and Technology (NTIS)

Online Computer Library Center
6565 Frantz Road
Dublin, Ohio 43017-0702

[redacted]

SilverPlatter
INFORMATION SERVICES

PRODUCT INFORMATION

SilverPlatter Information, Inc., 37 Walnut Street, Wellesley Hills, MA 02181 / 617-239-0306

ERIC

The Educational Resources Information Center (ERIC) database is the national U.S. bibliographic database covering the literature of education. One of the most widely searched databases in the world, it is now available on SilverPlatter Compact Discs. It is comprised of two separate files: (1) Resources in Education (RIE), handling the document and report "fugitive" literature, and (2) Current Index to Journals in Education (CIJE), handling the published journal article literature, as contained in over 775 major education-related serials/periodicals.

ERIC on SilverPlatter compact disc

Available to the public for years on magnetic tape and on-line, ERIC is now available in an exciting new high-tech format—compact digital disc, or CD-ROM, from SilverPlatter.

The entire ERIC database is provided on SilverPlatter CD-ROM discs, with indexes to access ERIC records and powerful and flexible search software. SilverPlatter offers the ERIC database for the first time in a totally local, self-contained, fixed cost system under your direct control without connect or communication costs.

The ERIC database is available on one or more archival discs that do not require updating (for example, 1966-1975 and 1976-1982). Data from 1983 to the current year is contained on a separate disc and is updated on a quarterly basis. Each disc is totally independent, containing all the records, indexes and software necessary for full use. The RIE and CIJE retrospective files are on separate discs while the current disc contains both RIE and CIJE records.

Searching ERIC on SilverPlatter compact disc

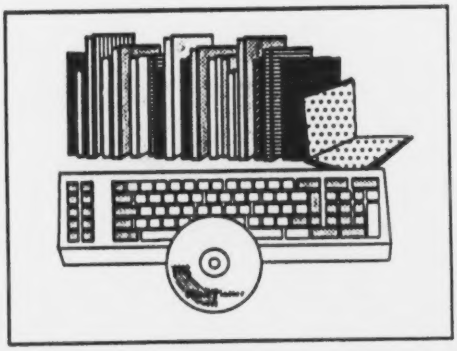
SilverPlatter's powerful and flexible search software is incorporated into ERIC's records on a compact disc. The user can perform all the search tasks available through the printed reference tools and most of the search tasks now possible on the major on-line systems without the connection and communication costs. For example, the user can:

SEARCH both subject matter fields (descriptors, identifiers, words in title, words in abstract) and non-subject matter fields (author names, institution names, publication type, language, geographic source, target audience, etc.).

BROWSE the dictionary of available index terms.

SPECIFY output requirements using Boolean operators: AND, OR, and NOT.

INTERACT to adjust your requirements based on initial outputs at your workstation.



ERIC • Ca-CD • NTIS • AGRICOLA • OSH-ROM • PsycLIT • sociofile
COMPU-INFO • CHEM-BANK • A-V ONLINE • LISA • CIRR • MEDLINE

Additional SilverPlatter Searching Features

Truncation capability, allows you to search all words with a common base prefix.

Proximity searching, permits you to specify that certain words must be adjacent or near one another in the field searched.

Context sensitive HELP information is contained on each disc to permit even first-time users to effectively conduct their own searches.

Subscribing to ERIC on SilverPlatter compact disc

Everything you need is provided with a single subscription. It operates on your IBM® personal computer with a compact disc drive that can be purchased form SilverPlatter. The subscription includes: compact discs (containing database, indexes and search software), documentation, and telephone Hotline support.

Your costs are fixed and fully identified up front. The ERIC database on SilverPlatter compact disc provides unlimited access within your predefined budget.

A number of different SilverPlatter database subscriptions can be supported on the same workstation.

For complete information about ERIC on SilverPlatter, contact:

◊ **SilverPlatter Information, Inc.**
37 Walnut Street
Wellesley Hills, MA 02181
617-239-0306

or

◊ **ERIC Database on SilverPlatter Compact Disc**
c/o ORI, Inc. Information Systems Division
4833 Rugby Ave., Suite 301
Bethesda, Maryland 20814
301-656-9723

SilverPlatter™
INFORMATION SERVICES

ERIC DATABASE ON COMPACT DISC
Subscription and License Agreement

SHIPMENT IS EXPRESSLY MADE SUBJECT TO THE TERMS AND CONDITIONS CONTAINED HEREIN, INCLUDING A LIMITATION OF WARRANTY AND A LIMITATION OF LIABILITY

Based on the terms and conditions contained herein, we hereby order the number of subscriptions (indicated below) to the SILVERPLATTER ERIC DATABASE (the "Product"). We understand that the Product will be delivered to us within 30 days after release of the current version of the Product and receipt of a signed purchase order or pre-payment of the subscription fee plus shipping and handling charges and taxes and duties where required, and that our license to use the Product will terminate 12 months after delivery of the Product.

	Price	Quantity	Total
ERIC Current (RIE & CIJE) Quarterly update (1981-present)	$ 650	______	$______
Annual update (1981-present)	$ 390	______	$______
ERIC Archival (purchase only) RIE and CIJE 2 discs (1966-1982)	$ 900	______	$______
ERIC Starter Kit Includes ERIC Quarterly subscription and Archival set (2 discs) Second & subsequent year subscription at $650 per year.	$1,200	______	$______
	TOTAL		$______

Subscription Fee (Check One)

______ Enclosed ______ Bill Me

______ P.O. Number

Please enclose check or purchase order and return to:

SilverPlatter Information, Inc.
37 Walnut St.
Wellesley Hills, MA 02181

(617) 239-0306

Licensee

Name: ______________________ Title: ______________________

Organization: ____

Address: ____

____

____

Telephone: ______________________ Extension: ______________________

Date: ______________ Authorized Signature: ______________________

1. Parties to Agreement

The parties to this Agreement are SilverPlatter Information, Inc. (hereinafter "Licensor"), and the Licensee identified on the first page of this Agreement.

2. The Product

The "Product" consists of the following: (1) the ERIC Database on SilverPlatter compact disc (current disc, 1981 - and/or archival discs for period prior to 1983); (2) the retrieval software (the "SilverPlatter Software") required to access the ERIC Database on the above discs; and (3) User Documentation on the ERIC Database and on the SilverPlatter Software.

3. The License

Licensor hereby grants to Licensee a non-transferable, non-exclusive license to use the Product according to the terms and conditions of this Agreement, which license shall terminate twelve (12) months after the delivery of the Product to Licensee, unless extended by Licensor for an additional term. Licensee shall use the Product only for internal purposes, shall not use the Product as a component of, or a basis for, a directory or database prepared for commercial sale or distribution outside the Licensee's organization and shall neither duplicate the Product nor alter the Product in any way; provided, however, that the Licensee may make one back-up copy of the SilverPlatter Software contained in the Product for Licensee's use in accordance with the terms of this Section 3.

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4. Ownership of Data and Database

The ERIC Database, as formatted by SilverPlatter for CD-ROM publishing, is owned by ORI, Inc. and no right to the ERIC Database or any part thereof in this form is conveyed to Licensee except the right to use it for the purpose of information retrieval in connection with research. Licensee may view the Database or parts thereof on its terminal or may print selected items from the Database by computer (and may make limited copies of such printout). Portions of the Database in this form may be copied (downloaded) onto electronic/magnetic media (or other machine-readable form) solely for temporary use or storage. However, the Database in this form in its entirety (or in lengthy sequences, such as a year's worth of data) may not be downloaded by Licensee for sale or conveyance to any other person or organization. Licensee agrees to restrict use of the Product to employees and clients of the Licensee, and not to provide the Product in a systematic way to a third party.

5. CD-ROM Disc Drives

The Product has been designed to operate on CD-ROM Disc Drives which have been tested by Licensor or in accordance with procedures established by Licensor. A list of such drives and procedures is available from Licensor.

6. Confidentiality

Licensee shall take all necessary action, whether by instruction, agreement, or otherwise, to restrict and control the use, copying, protection and security of the Product data, software, documentation and other support materials among Licensee's employees and prevent access except to those permitted to have acces by the terms of this Agreement.

7. Hotline

For one year from the date of delivery of the Product, Licensor will have consultants available by telephone during its normal business hours to answer questions and provide assistance for Licensee. Any such assistance will be at Licensee's sole risk and Licensor shall not be liable for any loss or damage arising therefrom.

8. Product Updates

The initial release of the Product will be updated quarterly. Updates will be issued to subscribers in the form of completely new current discs with the new information added. Upon receipt of an updated disc, Licensee shall return the outdated disc within 30 days. Failure to return the outdated disc will result in the withholding of subsequent updated discs. If and when software updates become available, Licensee shall have the right to purchase such updates at Licensor's then current prices.

9. Warranties

Licensor warrants and represents that it has the complete right to enter into this agreement and to deliver the Product and the database contained in the Product and the data in such database. THE FOREGOING WARRANTY IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. LICENSOR NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR LICENSOR ANY OTHER LIABILITY IN CONNECTION WITH THE LICENSING OF THE PRODUCT UNDER THIS AGREEMENT. ALTHOUGH CARE IS USED IN PREPARING THE DATABASE CONTAINED IN THE PRODUCT, LICENSOR DISCLAIMS ANY LIABILITY FOR THE ACCURACY THEREOF. LICENSOR AND THE SUPPLIERS OF THE DATABASE ASSUME NO RESPONSIBILITY WITH RESPECT TO LICENSEE'S USE OF THE PRODUCT AND SHALL NOT BE LIABLE FOR LOSS OF PROFITS, LOSS OF USE OR INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, EVEN IF AWARE OF THE POSSIBILITY THEREOF. IN NO EVENT MAY EITHER LICENSOR OR LICENSEE BRING ANY CLAIM OR CAUSE OF ACTION AGAINST THE OTHER MORE THAN ONE YEAR AFTER SUCH CLAIM OR CAUSE OF ACTION ARISES. LICENSOR SHALL IN NO EVENT BE LIABLE FOR MORE THAN THE LICENSE FEE THEN PAID FOR THE PRODUCT (WHETHER LICENSOR'S LIABILITY ARISES FROM BREACH OF WARRANTY, BREACH OF ANY OBLIGATION ARISING FROM BREACH OF WARRANTY, OTHER BREACH OF THIS CONTRACT, OR OTHERWISE AND WHETHER LIABILITY IS EXPRESSED IN CONTRACT OR IN TORT, INCLUDING NEGLIGENCE AND STRICT LIABILITY). SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF IMPLIED WARRANTIES OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO EACH LICENSEE.

10. Term

The term of this agreement shall be one year from the date of shipment by Licensor to Licensee and this agreement shall be renewed for successive one-year terms at the fees current on the renewal date unless either Licensee or Licensor gives notice to the other at least 60 days in advance of the expiration of the then current term.

11. Termination of License

If licensee breaches any term of this Agreement, in addition to all other legal remedies, Licensor may terminate the license granted hereunder. Upon termination of the License by Licensor or Licensee for any reason, Licensee shall, unless otherwise agreed to in writing by Licensor, return to Licensor the Product and all copies thereof, whether modified, merged or included with other data or software and shall certify in writing to Licensor that Licensee has not retained the Product or copies thereof. The provisions of this contract which protect the proprietary rights of Licensor shall continue in force after termination.

12. Indemnification

Licensee agrees to indemnify and hold Licensor harmless from and against any and all claims of third parties (including without limitation for copyright infringement) arising out of or related to the use of the Product by Licensee.

13. Notices

All notices, consents or other communications referred to herein shall be in writing, and shall be sent to the other party by first class mail addressed to that party at the address specified in this Agreement or to such alternate address as either party may furnish in writing to the other. Service of such notice, consent or other communication hereunder shall be effective on the second day after the day of mailing except as otherwise specified herein.

14. No Assignment by Licensee

This Agreement, and the license contained herein, may not be assigned by Licensee.

15. Enforcement by the Owners of the Data

This Agreement, to the extent it pertains to the Data contained in the ERIC DATABASE may be enforced by the owners thereof. Such owners are not otherwise a party to this Agreement for any purpose.

16. Force Majeure

Licensor shall not be responsible for any failure to perform (or delay in performance), in whole or in part, due to unforeseen circumstances or circumstances beyond Licensor's control, including but not limited to acts of God, war, riot, embargoes, acts of civil or military authority, fire, flood, accidents, strikes and shortages of transportation facilities, fuel, labor or materials.

17. Entire Understanding

This Agreement represents the entire understanding of the parties with respect to the subject matter hereof, and there are no representations, promises, warranties, covenants or understandings with respect thereto other than those contained in this Agreement. Without limiting the generality of the foregoing, it is expressly agreed that the terms of any purchase order issued by Licensee with respect to this Agreement or the Product shall not be applicable and that any acceptance of such purchase order by Licensor shall be for acknowledgment purposes only.

18. Illegality and Unenforceability

If a term or condition of this Agreement is found by a court or administrative agency to be invalid or unenforceable, the remaining terms and conditions hereof shall remain in full force and effect and shall be enforceable to the maximum extent permitted by law.

19. Law

This Agreement shall be governed by and construed in accordance with the laws of Massachusetts without giving effect to the principles of conflict of law thereof.

SilverPlatter
INFORMATION SERVICES

PRICE LIST

CD-ROM DATABASES

ERIC
Bibliographic database sponsored by the U.S. Department of Education, consisting of Resources in Education (RIE) file and the Current Index to Journals in Education (CIJE) file as prepared by the Information Systems Unit of ORI.

◊ ERIC Current Disc Annual Subscription (RIE & CIJE)	
Quarterly Update (1981 to present)	$ 650
or	
Annual Update (1981 to present)	$ 390
◊ ERIC Archival (Purchase only) RIE and CIJE - 2 discs (1966-1982)	$ 900
◊ ERIC COMPLETE STARTER SET Includes ERIC Quarterly Subscription and Archival set (2 discs). Second year subscription $650.	$1,200
◊ ERIC Current Disc Annual Subscription (Additional copies of Current Disc with Quarterly Updates only)	$ 250

AGRICOLA
CD-ROM version of the AGRICOLA bibiliographic database with citations of publications relating to all aspects of agriculture as compiled by the National Agriculture Library. Updated quarterly.

◊ AGRICOLA Current Disc Annual Subscription	$1,750
◊ AGRICOLA Archival (Purchase only) 1979-1982	$1,000
◊ Complete CAIN file to be available Fall 1987 Special price for subscribers to current AGRICOLA disc to be announced.	

CHEM-BANK
A collection of databanks of potentially hazardous chemicals containing, initially, three major databanks: RTECS from NIOSH, OHMTADS from the EPA, and CHRIS from the U.S. Coast Guard. Updated quarterly.

◊ CHEM-BANK Annual Subscription	$1,350

A-V ONLINE
Database of audiovisual materials from the National Information Center for Educational Media (NICEM). Covers the complete database. Updated annually.

◊ A-V ONLINE Annual Subscription	$ 795
◊ A-V ONLINE (Puchase only)	$1,195

LISA
Abstracts of the world's literature in librarianship, information science, and related disciplines as compiled by the Library Association Publishing Ltd. Covers the complete database from 1967. Updated annually.

◊ LISA Annual Subscription	$ 995

OSH-ROM
Occupational Health and Safety Information. Containing three complete datases from NIOSH (USE), HSELINE (UK), and CISDOC (UN). Updated semiannually.

◊ OSH-ROM Annual Subscription	$ 900

PsycLIT
Journal citations on psychology and behavioral sciences from the PsycINFO department of the American Psychological Association. Current disc is updated quarterly. All prices discounted 10% for subscribers to Psychological Abstracts (PA).

	LIST	PA DISCOUNT
◊ PsycLIT Current Disc Annual Subscription (1981-present)	$3,500	$3,150
◊ PsycLIT Archival Disc (1974-1982)		
First year of subscription	$1,495	$1,345
Second & subsequent years	$1,195	$1,075
◊ PsycLIT (1974-present) - 2 discs		
First year of subscription	$4,995	$4,495
Second & subsequent years	$4,695	$4,225

sociofile

Repository of the contents of the world's journals in sociology as compiled by Sociological Abstracts. Contains abstracts of journal articles published in Sociological Abstracts since 1974 and the enhanced bibiliographic citations for dissertations in sociology and related disciplines that have been added to the database since 1986. Updated semiannually.

◊ sociofile Annual Subscription	$1,950
◊ For subscribers to other SilverPlatter databases - 10% discount	$1,750

CORPORATE & INDUSTRY RESEARCH REPORTS (CIRR)

A cumulative index with abstracts to over 70,000 corporate and industry reports written by securities and investment banking firms from 1979-1986. Updated annually.

◊ CIRR Annual Subscription	
First year of subscription	$1,250
Second and subsequent years	$1,500

NTIS

Bibliographic citations to government sponsored research and development reports produced by the National Technical Information Service. Updated quarterly.

◊ NTIS Current Disc Annual Subscription and four year Archival set Pre-publication offer valid until 8/31/87 Thereafter, $3,750 per year	$3,000

Ca-CD

References, abstracts and commentaries of the world's literature in cancer and related subjects from Elsevier Science Publishers and Yearbook Medical Publishers (information from other producers of medical information to be added later). Updated quarterly.

◊ Ca-CD Current Disc (1984-present)	$2,500

MEDLINE

Produced by the National Library of Medicine, MEDLINE contains bibiliographic citations and abstracts for biomedical literature. Updated quarterly.

◊ MEDLINE Current year and two year back files	$1,750
◊ MEDLINE Current year and four year back files	$2,500

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Contains reference information about 12,000 computer product listings from 1,500 companies worldwide. COMPU-INFO allows access by 300 specific categories as well as by name and model.

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Sony	CDU 100 CD-ROM disc drive

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- ◊ Prices subject to change
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MINITEX
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Pittsburgh Regional Library Center
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Australia:

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275 Normanby Street
Port Melbourne
Victoria 3207
(Tel: 613-647-980)

United Kingdom:

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P.O. Box 3
Newman Lane
Alton Hants GU34 2PG
(Tel: 0420-86848)

Far East:
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Pacific Rim Specialists
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Irvine, CA 92716
USA
(Tel: 714-641-6645)

Middle East:

Library Business Interior International
P.O. Box 641
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New Hartford, NY 13413
USA
(Tel: 315-732-7030)

Scandinavia & Holland:

Nedbook International
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Amsterdam 1003 AC
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Lange & Springer
Otto-Suhr-Allee 26-28
D-1000 Berlin 10
West Germany
(Tel: 49-30-820711)

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Directory of
ERIC®
INFORMATION SERVICE PROVIDERS

Arranged by Geographic Location

- Country
- State
- City

May 1986

Edited By: Ted Brandhorst and
Joanna Eustace

Prepared by the
Educational Resources Information Center (ERIC)
ERIC Processing and Reference Facility

Sample Directory Entry

Central University
General Library
1234 Main Street
Middletown, DC 54321

		NOTES
Communications:	Telephone: (800) 987-6543; FTS: 999-9999; Cable: INFOLIB; Telex: 12345; E-Mail: ALANET	Telephone number verified. Other numbers/codes listed as provided.
Contact:	John Smith, Director; William Brown, Reference Librarian	
Clientele: [Served]	(1) University faculty; (2) University students; (3) Area residents	Listed in order of priority
Equipment:	(1) Microfiche reader (3); (2) Microfiche reader/printer (2); (3) Microfiche duplicator; (4) Office copier; (5) Microcomputer; (6) Computer terminal	Equipment quantity noted in parentheses.
[ERIC] Collection:	(1) RIE [Dates]; (2) CIJE [Dates]; (3) *Thesaurus* [Edition]; (4) ERICTOOLS; (5) Microfiche [Dates]; (6) Clearinghouse publications	RIE started in 1966. CIJE started in 1969. Microfiche started in 1966. ERICTOOLS = Identifier Authority List, Title Index, etc.
Services:	(1) PC reproduction; (2) MF duplication; (3) Search services [batch and/or online: search system used]; (4) Library services	PC = paper copy MF = microfiche

Table 1

Number of ERIC Information Service Providers by State, Outlying Territory, and Foreign Country

STATE	ERIC SERVICE PROVIDERS
ALABAMA	14
ALASKA	4
ARIZONA	7
ARKANSAS	11
CALIFORNIA	56
COLORADO	14
CONNECTICUT	8
DELAWARE	3
DISTRICT OF COLUMBIA	19
FLORIDA	26
GEORGIA	23
HAWAII	2
IDAHO	3
ILLINOIS	28
INDIANA	11
IOWA	7
KANSAS	11
KENTUCKY	11
LOUISIANA	15
MAINE	6
MARYLAND	20
MASSACHUSETTS	22
MICHIGAN	22
MINNESOTA	10
MISSISSIPPI	13
MISSOURI	19
MONTANA	6
NEBRASKA	8
NEVADA	3
NEW HAMPSHIRE	6
NEW JERSEY	22
NEW MEXICO	7
NEW YORK	65
NORTH CAROLINA	24
NORTH DAKOTA	1
OHIO	26
OKLAHOMA	16
OREGON	10
PENNSYLVANIA	33
RHODE ISLAND	3
SOUTH CAROLINA	9
SOUTH DAKOTA	3
TENNESSEE	12
TEXAS	55
UTAH	6
VERMONT	3
VIRGINIA	24
WASHINGTON	13
WEST VIRGINIA	9
WISCONSIN	21
WYOMING	1
SUBTOTAL	771

OUTLYING TERRITORY	ERIC SERVICE PROVIDERS
GUAM	1
PUERTO RICO	6
VIRGIN ISLANDS	2
SUBTOTAL	9

FOREIGN COUNTRY	ERIC SERVICE PROVIDERS
AUSTRALIA	26
BELGIUM	1
CANADA	49
DENMARK	1
ENGLAND	4
FINLAND	1
FRANCE	1
HONG KONG	1
ISRAEL	1
ITALY	1
JAPAN	2
LEBANON	1
MEXICO	3
NETHERLANDS	3
NEW ZEALAND	2
NORWAY	1
PAPUA NEW GUINEA	1
PHILIPPINES	1
SOUTH AFRICA	1
SWEDEN	2
SWITZERLAND	2
WEST GERMANY	6
SUBTOTAL	111

GRAND TOTAL 891

Attachment 87-8c:
Page 1 of 1

Table 2

Number of ERIC Information Service Providers By Type of Organization

Government		
Federal Agencies		16
State Agencies		29
Intermediate (Joint State/Local Agencies)		10
Local (City/County) Agencies		31
	Subtotal	86
Non-Profit		
Higher Education Institutions		597
Public Libraries (City/County/State)		36
ERIC Clearinghouses		16
Other Non-Profit		23
	Subtotal	672
For Profit Organizations		12
Individuals		1
Non-Domestic Organizations		
U.S. Outlying Territories		9
Foreign (both Governmental and Non-Governmental)		110
International		1
	Subtotal	120
	Grand Total	**891**

Attachment 87-8d:
Page 1 of 2

Directory of ERIC Information Service Providers
Request for Information for 1985 Edition

NAME: ____________________

____

Full organizational name (no abbreviations), generally citing the largest unit first.

ADDRESS: ____________________

____

Full street address and zip code (not just box number, but how to get there).

COMMUNICATIONS: ____________________

____

Telephone number(s) (including area code), FTS Number, Telex number, Cable address, electronic mail systems, etc. All the options for communicating with your organization.

CONTACT: ____________________

____

Preferred contact person(s). May be a specific person or a position title (e.g. "Reference Librarian"). Some organizations may want to list both manager and reference contact points.

POPULATION SERVED (CLIENTELE): ____________________

____

Which group(s) the organization will serve. Organizations that do not restrict their clientele should be identified by the notation "Open", otherwise cite the specific group(s) served in order of priority, e.g. "(1) University faculty and students; (2) State educational community; (3) State residents."

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☐ Current Index to Journals in Education (CIJE) ______________________ (Dates)

☐ Thesaurus of ERIC Descriptors ______________________ (Edition)

☐ ERICTOOLS (Title Index, Source Directory, Identifer Authority List, etc.)

☐ ERIC Microfiche Collection ______________________ (Dates)

☐ ERIC Clearinghouse Information Analysis Products

☐ Other (Specify) ______________________

SERVICES PROVIDED:

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☐ Microfiche Duplication

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Tel.: (301) 656-9723

ERIC Ready Reference #1
Revised December 1986

ERIC Accession Number Ranges
(By Year)

Resources in Education (RIE)

PRE-1966	ED	001 001 — 003 960
1966	ED	010 000 — 010 093
1967	ED	010 094 — 012 348
1968	ED	012 349 — 021 151
1969	ED	021 152 — 031 604
1970	ED	031 605 — 042 060
1971	ED	042 061 — 054 390
1972	ED	054 391 — 066 620
1973	ED	066 621 — 080 787
1974	ED	080 788 — 095 253
1975	ED	095 254 — 110 594
1976	ED	110 595 — 127 413
1977	ED	127 414 — 142 684
1978	ED	142 685 — 157 987
1979	ED	157 988 — 174 743
1980	ED	174 744 — 190 736
1981	ED	190 737 — 205 670
1982	ED	205 671 — 219 495
1983	ED	219 496 — 233 122
1984	ED	233 123 — 247 369
1985	ED	247 370 — 260 172
1986	ED	260 173 — 272 646

Current Index to Journals in Education (CIJE)

1969	EJ	000 001 — 011 707
1970	EJ	011 708 — 027 599
1971	EJ	027 600 — 045 271
1972	EJ	045 272 — 062 751
1973	EJ	062 752 — 082 164
1974	EJ	082 165 — 101 872
1975	EJ	101 873 — 121 926
1976	EJ	121 927 — 142 252
1977	EJ	142 253 — 163 351
1978	EJ	163 352 — 186 217
1979	EJ	186 218 — 207 484
1980	EJ	207 485 — 229 235
1981	EJ	229 236 — 250 663
1982	EJ	250 664 — 267 876
1983	EJ	267 877 — 286 200
1984	EJ	286 201 — 305 036
1985	EJ	305 037 — 323 036
1986	EJ	323 037 — 340 802

ERIC Publication Types

ERIC Ready Reference #2
Revised April 1984

Code	Publication Types
010	BOOKS
	COLLECTED WORKS
020	— General
021	— Conference Proceedings
022	— Serials
030	CREATIVE WORKS (Literature, Drama, Fine Arts)
	DISSERTATIONS/THESES
040	— Undetermined
041	— Doctoral Dissertations
042	— Masters Theses
043	— Practicum Papers
	GUIDES
050	— General
	— Classroom Use
051	— Instructional Materials (For Learner)
052	— Teaching Guides (For Teacher)
055	— Non-Classroom Use (For Administrative & Support Staff, and for Teachers, Parents, Clergy, Researchers, Counselors, etc. in Non-Classroom Situations)
060	HISTORICAL MATERIALS
070	INFORMATION ANALYSES (Literature Reviews, State-of-the-Art Papers)
071	— ERIC Information Analysis Products (IAP's)
080	JOURNAL ARTICLES

Code	Publication Types
090	LEGAL/LEGISLATIVE/REGULATORY MATERIALS
100	AUDIOVISUAL/NON-PRINT MATERIALS
101	— Computer Programs
110	STATISTICAL DATA (Numerical, Quantitative, etc.)
120	VIEWPOINTS (Opinion Papers, Position Papers, Essays, etc.)
	REFERENCE MATERIALS
130	— General
131	— Bibliographies
132	— Directories/Catalogs
133	— Geographic Materials
134	— Vocabularies/Classifications/Dictionaries
	REPORTS
140	— General
141	— Descriptive
142	— Evaluative/Feasibility
143	— Research/Technical
150	SPEECHES, CONFERENCE PAPERS
160	TESTS, EVALUATION INSTRUMENTS
170	TRANSLATIONS
171	— Multilingual/Bilingual Materials
999	OTHER/MISCELLANEOUS (Not Classifiable Elsewhere)

Attachment 87-9:
Page 2 of 12

ERIC Ready Reference #3
Revised March 1984

SAMPLE RIE RESUME

ERIC Accession Number—identification number sequentially assigned to documents as they are processed.

Author(s).

Title.

Organization where document originated.

Date Published.

Contract or Grant Number.

Alternate source for obtaining document.

Language of Document—documents written entirely in English are not designated, although "English" is carried in their computerized records.

Publication Type—broad categories indicating the form or organization of the document, as contrasted to its subject matter. The category name is followed by the category code.

ERIC Document Reproduction Service (EDRS) Availability—"MF" means microfiche; "PC" means reproduced paper copy. When described as "Document Not Available from EDRS," alternate sources are cited above. Prices are subject to change; for latest price code schedule see section on "How to Order ERIC Documents," in the most recent issue of RIE.

ED 654 321 CE 123 456
Smith, John D. *Johnson, Jane*
Career Planning for Women.
Central Univ., Chicago, IL.
Spons Agency—National Inst. of Education (ED), Washington, DC.
Report No. — CU-2081-S
Pub Date — May 83
Contract— NIE-C-83-0001
Note — 129p.; Paper presented at the National Conference on Career Education (3rd, Chicago, IL, May 15-17, 1983).
Available from—Campus Bookstore, 123 College Ave., Chicago, IL 60690 ($3.25).
Language—English, French
Pub Type—Speeches/Meeting Papers (150)
EDRS Price—MF01/PC06 Plus Postage.
Descriptors — Career Guidance, *Career Planning, Careers, *Demand Occupations, *Employed Women, *Employment Opportunities, Females, Labor Force, Labor Market, *Labor Needs, Occupational Aspiration, Occupations
Identifiers — Consortium of States, *National Occupational Competency Testing Institute

Women's opportunities for employment will be directly related to their level of skill and experience and also to the labor market demands through the remainder of the decade. The number of workers needed for all major occupational categories is expected to increase by about one-fifth between 1980 and 1990, but the growth rate will vary by occupational group. Professional and technical workers are expected to have the highest predicted rate (39 percent), followed by service workers (35 percent), clerical workers (26 percent), sales workers (24 percent), craft workers and supervisors (20 percent), managers and administrators (15 percent), and operatives (11 percent). This publication contains a brief discussion and employment information concerning occupations for professional and technical workers, managers and administrators, skilled trades, sales workers, clerical workers, and service workers. In order for women to take advantage of increased labor market demands, employer attitudes toward working women need to change and women must: (1) receive better career planning and counseling, (2) change their career aspirations, and (3) fully utilize the sources of legal protection and assistance that are available to them. (SB)

Clearinghouse Accession Number.

Sponsoring Agency—agency responsible for initiating, funding, and managing the research project.

Report Number—assigned by originator.

Descriptive Note (pagination first).

Descriptors—subject terms found in the *Thesaurus of ERIC Descriptors* that characterize substantive content. Only the major terms, preceded by an asterisk, are printed in the subject index.

Identifiers—additional identifying terms not found in the *Thesaurus*. Only the major terms, preceded by an asterisk, are printed in the subject index.

Informative Abstract.

Abstractor's Initials.

ERIC Ready Reference #4
June 1984

HOW TO USE THE THESAURUS OF ERIC® DESCRIPTORS FOR AN EFFECTIVE ERIC SEARCH

FIRST....

1. Identify your specific topic, in your own terms.
2. "Translate" your topic into ERIC Descriptors (subject index terms). The Rotated Descriptor Display in the back of the *Thesaurus* may help you.
3. List the best Descriptors and locate them in the Alphabetical Descriptor Display (the main part of the *Thesaurus*).
   a. Read the Scope Notes (SN) for information on how ERIC uses the terms.
   b. Check the Broader Terms (BTs), Narrower Terms (NTs), and Related Terms (RTs) under your Descriptors and identify possible other Descriptors relevant to your topic.
   c. Make a list of other Descriptors that you might also use.
   d. Look up those Descriptors and repeat steps 3a-c.
4. Make a final list of the Descriptors most likely to have been used to represent your topic.

THEN....

FOR A MANUAL SEARCH: Look under your Descriptors in the Subject Index of *Resources in Education* (RIE) and *Current Index to Journals in Education* (CIJE) monthly and cumulative issues to find titles relevant to your search.

FOR A COMPUTER SEARCH: Follow the directions of your particular library or information retrieval system for a search of the ERIC database (all or any group of years).

NOTE: The Introduction to the *Thesaurus* contains information helpful to searchers on ERIC indexing rules, deleted and invalid Descriptors, and useful parts of the Descriptor entry, such as the date the term was added to the *Thesaurus* and the number of times it has been used.

ERIC Ready Reference #5
Revised October 1986

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PC 22	526 - 550	40.70
PC 23	551 - 575	42.55
PC 24	576 - 600	44.40
PC 25	601 - 625	46.25
PC 26	626 - 650	48.10
PC 27	651 - 675	49.95
PC 28	676 - 700	51.80
PC 29	701 - 725	53.65
PC 30	726 - 750	55.50
PC 31	751 - 775	57.35
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MF 05	769 - 864	9	1.42
MF 06	865 - 960	10	1.58
MF 07	961 - 1,056	11	1.74
MF 08	1,057 - 1,152	12	1.90
MF 09	1,153 - 1,248	13	2.06
MF 10	1,249 - 1,344	14	2.22
MF 11	1,345 - 1,440	15	2.38
MF 12	1,441 - 1,536	16	2.54
MF 13	1,537 - 1,632	17	2.70
MF 14	1,633 - 1,728	18	2.86
MF 15	1,729 - 1,824	19	3.02

ADD $0.16 FOR EACH ADDITIONAL MICROFICHE (1-96 PAGES)

ERIC Ready Reference #6
Revised April 1987

ERIC CLEARINGHOUSES *(and Other Network Components)*

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The exact number of Clearinghouses has fluctuated over time in response to the shifting needs of the educational community. There are currently 16 Clearinghouses. These are listed below, together with full addresses, telephone numbers, and brief scope notes describing the areas they cover.

ERIC Clearinghouse on *Adult, Career, and Vocational Education* (CE)
Ohio State University
National Center for Research in Vocational Education
1960 Kenny Road
Columbus, Ohio 43210-1090
Telephone: (614) 486-3655; (800) 848-4815

All levels and settings of adult and continuing, career, and vocational/technical education. Adult education, from basic literacy training through professional skill upgrading. Career education, including career awareness, career decisionmaking, career development, career change, and experience-based education. Vocational and technical education, including new subprofessional fields, industrial arts, corrections education, employment and training programs, youth employment, work experience programs, education/business partnerships, entrepreneurship, adult retraining, and vocational rehabilitation for the handicapped.

ERIC Clearinghouse on *Counseling and Personnel Services* (CG)
University of Michigan
School of Education, Room 2108
610 East University Street
Ann Arbor, Michigan 48109-1259
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings; theoretical development of counseling and guidance; personnel procedures such as testing and interviewing and the analysis and dissemination of the resultant information; group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

ERIC Clearinghouse on *Educational Management* (EA)
University of Oregon
1787 Agate Street
Eugene, Oregon 97403-5207
Telephone: (503) 686-5043

The leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators; tasks and processes of administration; methods and varieties of organization and organizational change; and the social context of educational organizations.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

ERIC Clearinghouse on *Elementary and Early Childhood Education* (PS)
University of Illinois
College of Education
805 W. Pennsylvania Avenue
Urbana, Illinois 61801-4897
Telephone: (217) 333-1386

The physical, cognitive, social, educational, and cultural development of children from birth through early adolescence; prenatal factors; parental behavior factors; learning theory research and practice related to the development of young children, including the preparation of teachers for this educational level; educational programs and community services for children; and theoretical and philosophical issues pertaining to children's development and education.

ERIC Clearinghouse on *Handicapped and Gifted Children* (EC)
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091-1589
Telephone: (703) 620-3660

All aspects of the education and development of the handicapped and gifted, including prevention, identification and assessment, intervention, and enrichment, both in special settings and within the mainstream.

ERIC Clearinghouse on *Higher Education* (HE)
George Washington University
One Dupont Circle, N.W., Suite 630
Washington, D.C. 20036-1183
Telephone: (202) 296-2597

Topics relating to college and university conditions, problems, programs, and students. Curricular and instructional programs, and institutional research at the college or university level. Federal programs, professional education (medicine, law, etc.), professional continuing education, collegiate computer-assisted learning and management, graduate education, university extension programs, teaching-learning, legal issues and legislation, planning, governance, finance, evaluation, interinstitutional arrangements, management of institutions of higher education, and business or industry educational programs leading to a degree.

ERIC Clearinghouse on *Information Resources* (IR)
Syracuse University
School of Education
Huntington Hall, Room 030
150 Marshall Street
Syracuse, New York 13244-2340
Telephone: (315) 423-3640

Educational technology and library and information science at all levels. Instructional design, development, and evaluation are the emphases within educational technology, along with the media of educational communication: computers and microcomputers, telecommunications (cable, broadcast, satellite), audio and video recordings, film and other audiovisual materials, as they pertain to teaching and learning. Within library and information science the focus is on the operation and management of information services for education-related organizations. All aspects of information technology related to education are considered within the scope.

ERIC Clearinghouse for *Junior Colleges* (JC)
University of California at Los Angeles (UCLA)
Mathematical Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024-1564
Telephone: (213) 825-3931

Development, administration, and evaluation of two-year public and private community and junior colleges, technical institutes, and two-year branch university campuses. Two-year college students, faculty, staff, curricula, programs, support services, libraries, and community services. Linkages between two-year colleges and business/industrial organizations. Articulation of two-year colleges with secondary and four-year postsecondary institutions.

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ERIC Clearinghouse on *Languages and Linguistics* (FL)
Center for Applied Linguistics
1118 22nd Street, N.W.
Washington, D.C. 20037-0037
Telephone: (202) 429-9551

Languages and language sciences; theoretical and applied linguistics; all areas of foreign language, second language, and linguistics instruction, pedagogy, or methodology; psycholinguistics and the psychology of language learning; cultural and intercultural context of languages; application of linguistics in language teaching; bilingualism and bilingual education; sociolinguistics; study abroad and international exchanges; teacher training and qualifications specific to the teaching of foreign languages and second languages; commonly and uncommonly taught languages, including English as a second language; related curriculum developments and problems.

ERIC Clearinghouse on *Reading and Communication Skills* (CS)
National Council of Teachers of English
1111 Kenyon Road
Urbana, Illinois 61801-1096
Telephone: (217) 328-3870

Reading, English, and communication skills (verbal and nonverbal), preschool through college; educational research and instruction development in reading, writing, speaking, and listening; identification, diagnosis, and remediation of reading problems; speech communication (including forensics), mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching; instructional materials, curricula, tests/measurement, and methodology at all levels of reading; the role of libraries and other agencies in fostering and guiding reading; diagnostics and remedial reading services in schools and clinical settings. Preparation of reading teachers and specialists.

ERIC Clearinghouse on *Rural Education and Small Schools* (RC)
New Mexico State University
Computer Center (Room 218), Stewart Street
Department 3AP, Box 30001
Las Cruces, New Mexico 88003-0001
Telephone: (505) 646-2623

Economic, cultural, social, or other factors related to educational programs and practices for rural residents; American Indians/Alaska Natives, Mexican Americans, and migrants; educational practices and programs in all small schools; outdoor education.

ERIC Clearinghouse for *Science, Mathematics, and Environmental Education* (SE)
Ohio State University
1200 Chambers Road, Room 310
Columbus, Ohio 43212-1792
Telephone: (614) 292-6717

Science, mathematics, and environmental education at all levels, and within these three broad subject areas, the following topics: development of curriculum and instructional materials; teachers and teacher education; learning theory/outcomes (including the impact of parameters such as interest level, intelligence, values, and concept development upon learning in these fields); educational programs; research and evaluative studies; media applications; computer applications.

ERIC Clearinghouse for *Social Studies/Social Science Education* (SO)
Indiana University
Social Studies Development Center
2805 East 10th Street
Bloomington, Indiana 47405-2373
Telephone: (812) 335-3838

All levels of social studies and social science education; content of the social science disciplines; applications of theory and research to social science education; contributions of social science disciplines (anthropology, economics, geography, history, sociology, social psychology, political science); education as a social science; comparative education (K-12); content and curriculum materials on "social" topics such as law-related education, ethnic studies, bias and discrimination, aging, adoption, women's equity, and sex education.

ERIC Clearinghouse on *Teacher Education* (SP)
American Association of Colleges for Teacher Education
One Dupont Circle, N.W., Suite 610
Washington, D.C. 20036-2412
Telephone: (202) 293-2450

School personnel at all levels; teacher selection and training, preservice and inservice preparation, and retirement; the theory, philosophy, and practice of teaching; curricula and general education not specifically covered by other clearinghouses; all aspects of physical education, health education, and recreation education.

ERIC Clearinghouse on *Tests, Measurement, and Evaluation* (TM)
Educational Testing Service
Rosedale Road
Princeton, New Jersey 08541-0001
Telephone: (609) 734-5176

Tests and other measurement devices; methodology of measurement and evaluation; application of tests, measurement, or evaluation in educational projects or programs; research design and methodology in the area of testing and measurement/evaluation; learning theory in general.

ERIC Clearinghouse on *Urban Education* (UD)
Teachers College, Columbia University
Institute for Urban and Minority Education
Main Hall, Room 300, Box 40
525 W. 120th Street
New York, New York 10027-9998
Telephone: (212) 678-3433

Programs and practices in public, parochial, and private schools in urban areas and the education of particular racial/ethnic minority children and youth in various settings — local, national, and international; the theory and practice of educational equity; urban and minority experiences; and urban and minority social institutions and services.

Educational Resources Information Center
(Central ERIC)
U.S. Department of Education
Office of Educational Research and Improvement (OERI)
Washington, D.C. 20208-1235
Telephone: (202) 357-6289

ERIC Processing & Reference Facility
ORI, Inc., Information Systems
4350 East-West Highway, Suite 1100
Bethesda, Maryland 20814-4475
Telephone: (301) 656-9723

ERIC Document Reproduction Service (EDRS)
Computer Microfilm Corporation (CMC)
3900 Wheeler Avenue
Alexandria, Virginia 22304-5110
Telephone: (703) 823-0500; (800) 227-3742

Oryx Press
2214 North Central Avenue at Encanto
Phoenix, Arizona 85004-1483
Telephone: (602) 254-6156; (800) 457-6799

ERIC® Ready Reference #7
Revised March 1987 (Rev. 2)

ERIC Fact Sheet*

I. Usage Statistics (Estimated)**

A. Institutions in U.S. Providing Access to ERIC Products	3,269
B. Usages of ERIC Resources (Annually)	2.7 million
C. ERIC Bibliographic Records Retrieved in Searches and Provided to Clients (Annually)	30 million
D. Annual Expenditure by Institutions to Support Distribution of ERIC Resources to Users	$26 million
E. Total Annual Expenditure for the Development, Distribution, and Use of ERIC Resources in U.S. (only 4.1% provided by the Federal government)	$136 million

II. Abstract Journal Services

A. *Resources in Education* (RIE)	
1. Documents Evaluated Annually for Possible Announcement in RIE	35,000
2. Documents Announced in RIE	
a. Monthly (Average)	1,100
b. Annually (Current Level)	13,000
c. To date (1966 through December 1986)	265,600
3. Subscriptions (primarily libraries)	2,000
B. *Current Index to Journals in Education* (CIJE)	
1. Subscriptions (primarily libraries)	1,800
2. Journals Covered	760
3. Journals Articles Announced in CIJE	
a. Monthly (Average)	1,500
b. Annually (Current Level)	18,000
c. To date (1969 through December 1986)	340,802

III. Document Reproduction Services

A. *Microfiche Collections*	
Organizations Offering Significant ERIC Microfiche Collections for Public Access (including approximately 90 foreign locations)	780
B. Titles Microfilmed (less than 3% of current document input is copyrighted)	
1. Monthly (per RIE issue)	1,075
2. Annually	12,800

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*Many of the statistics reported here are constantly changing and therefore have been rounded.

**Source King Research, Inc. *Cost and Usage Study of the Educational Resources Information Center (ERIC) System. Final Report.* January 1982. (ED-208 902 and ED-208 903)

C. Microfiche Cards Delivered Per Subscriber	
1. Monthly (per RIE issue)	1,500
2. Annually	18,000
D. Sales (from ERIC Document Reproduction Service (EDRS))	
1. Microfiche Sold on Subscription (Annually)	16,000,000
2. On Demand Document Orders Processed Annually (microfiche or paper copy)	15,000

IV. Database Searching Services

A. Subscriptions to ERIC Magnetic Tapes	35
B. Locations Offering Computer Searches of ERIC Files (estimated)	700

V. References Services (Non-Computerized)

A. Inquiries/Questions Answered Annually	
1. ERIC Facility	4,000
2. Clearinghouses (16)	115,000

VI. Miscellaneous Statistics

A. Database Size (RIE and CIJE) through December 1986	606,402
B. Thesaurus Vocabulary Terms (as of 11th Edition, 1987)	9,459
C. Identifiers (as of *Identifier Authority List*, December 1985)	36,750
D. Information Analysis Products (IAPs) Produced by ERIC Clearinghouses (1967-1985)	4,451
E. Organizations/Institutions Contributing Documents to the ERIC Database	30,000

ERIC® Ready Reference #8
May 1986

TARGET AUDIENCE

Educational documents and journal articles are sometimes written for particular audiences. ERIC currently identifies these audiences in a special "Target Audience" field (data element). The field is used when an author clearly specifies an intended audience; otherwise, it is left blank. For consistency, eleven (11) distinct audiences have been defined by ERIC, as follows:

- **Policymakers**
- **Researchers**
- **Practitioners***
  - **Administrators**
  - **Teachers**
  - **Counselors**
  - **Media Staff**
  - **Support Staff**
- **Students**
- **Parents**
- **Community**

******Note:* *The ERIC computer system automatically adds the generic audience "Practitioners" to records cataloged by any of the five "practitioner" sub-categories.*

Each of the major online retrieval vendors provides access to ERIC's "Target Audience" data, and computer searchers can employ this data to limit output and improve relevance. Each vendor provides access in a different way and has a different segment of records containing "Target Audience" data on its file. These differences are summarized below:

DIALOG

Access:	Via the prefix "TA=," e.g., S TA=PRACTITIONERS
File Segment:	RIE from Jan84; CIJE from Sep84. Retrospective RIE postings (May75-Dec83, "Practitioners" and "Students" only).

BRS

Access:	"Target Audience" data merged with Identifier data, e.g.: IDENTIFIERS: Great Britain. West Indians. Caribbean. TARGET AUDIENCE: Policymakers. Searching must be done with this in mind, e.g.: POLICYMAKERS.ID. AND (TARGET ADJ AUDIENCE).ID.
File Segment:	RIE from Jan84; CIJE from Sep84. Retrospective RIE postings (Nov83-Dec83, "Practitioners" and "Students" only).

SDC

Access:	Via the suffix "/TG," e.g., PRACTITIONERS/TG
File Segment:	RIE from Aug85; CIJE from Aug85.

ERIC® **Ready Reference #9**
June 1987

ERIC Digests

ERIC Digests are:

- short reports (1000-1500 words on one or two pages) on topics of prime current interest in education
- targeted specifically for teachers, administrators, policymakers, and other practitioners, but generally useful to the broad educational community
- designed to provide an overview of information on a given topic, plus references to items providing more detailed information
- produced by the 16 subject-specialized ERIC Clearinghouses, and reviewed by experts and content specialists in the field
- funded by the Office of Educational Research and Improvement (OERI), of the U.S. Department of Education
- available in original printed form directly from the producing Clearinghouses (ask to be placed on their mailing lists — ERIC Ready Reference #6 lists the Clearinghouses, together with full addresses, telephone numbers, and brief scope notes describing the areas they cover)

ERIC Digests Online (EDO) is:

- a *full-text* database containing the complete text of recent ERIC Digests
- a fast, accurate, and dependable source of directly usable and practical information for the educational community, including teachers, administrators, counselors, policymakers, and parents
- available on ED-LINE (an online news, information, and electronic mail system for educators and others interested in education) via THE SOURCE online information network
- accessed on THE SOURCE by entering "EDLINE ERIC," or, alternatively, via ED-LINE's main menu
- searchable either by general topical categories (menu items) or key words (ERIC Descriptors)
- an online bulletin board (via a "user notespace"), allowing users to comment on the Digests or to read others' comments
- updated monthly, with at least 10 new Digests added each month
- approximately 190 Digests in size as of June 1987

How to Get Connected to EDO:

- Hardware/Software Needed
  - a terminal used to communicate with online services
    OR
  - a microcomputer, telephone line, modem, and communications software (directions on how to use specific hardware/software for online access can be found in the manufacturers' manuals)
- Subscription to ED-LINE

  For information on subscribing to ED-LINE, including membership in THE SOURCE, contact ED-LINE at the address or telephone listed on the verso. An ED-LINE subscription includes *The Source Manual* and a unique ID number and password to THE SOURCE. THE SOURCE gives ED-LINE subscribers a reduced hourly connect charge.

Searching EDO On-Line

- Sign on to THE SOURCE (see "Sign On" in *The Source Manual*)
- THE SOURCE menu appears
- At first prompt (:), type "Q"
- At "command level" prompt (->),
  - a. Type "EDLINE," which takes you to ED-LINE's main menu; Select EDO from the menu

    OR
  - b. Type "EDLINE ERIC" and go directly to EDO
- EDO main menu appears, as follows:
  1 Using ERIC Digests Online (EDO)
  2 Search for Digests by Menu Categories
  3 Search for Digests by Key Words
  4 New ERIC Digests
  5 User Notespace
  6 ERIC Information

Any item selected from the EDO main menu will guide you through a series of sub-menus to the information you need. Digests can be searched for by using ERIC Descriptors (main menu item 3) or by using topical categories (main menu item 2). The "New Digests" option (main menu item 4) lists just the new Digests added that month — about 10. The "User Notespace" (main menu item 5) provides a means for users to make comments on EDO, suggestions for new Digest topics, or comments on specific Digests; users can read the remarks in the notespace and/or add to them. The sub-menu of the "User Notespace" has an item labeled "Learn How to Use EDO User Notespace," which, when selected, prints out or displays a complete list, by Clearinghouse, of the ERIC Digests currently on the EDO file. Users not yet signed up with ED-LINE and THE SOURCE can obtain this list by contacting EDO at the address/telephone number provided below.

At any menu (numbered group of categories), a category is chosen by entering its number at the prompt (:). At any prompt, typing ".P" returns you to the previous menu; ".M" returns you to EDO's main menu; ".Q" leaves EDO and returns you to ED-LINE's main menu. Pressing the Return key at any prompt displays the particular list of options available at that prompt.

Typing "Q" at the prompt following ED-LINE's main menu returns you to a "command level" prompt (->), at which time you can proceed with a session on THE SOURCE or enter "OFF" to disconnect. Or, you can enter the appropriate number from the ED-LINE menu that will disconnect you from both ED-LINE and THE SOURCE.

For information on how to subscribe to ED-LINE, contact:

ED-LINE
National School Public Relations
Association (NSPRA)
1501 Lee Highway
Arlington, VA 22209
Telephone: (703) 528-5840

For more information about EDO, including a current list of titles, contact:

ERIC DIGESTS ONLINE (EDO)
ERIC Clearinghouse on Elementary
and Early Childhood Education
University of Illinois
805 West Pennsylvania Avenue
Urbana, IL 61801-4897
Telephone: (217) 333-1386

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Attachment 87-10a:
Page 1 of 4

JULY 1987
(432 DIGESTS)

ERIC DIGESTS

A COMPLETE LIST OF ALL ERIC DIGESTS TO DATE, ARRANGED ALPHABETICALLY BY TITLE

The 1983 Educational Reform Reports (UD)
Academic Freedom in the Public Schools (SO)
Academic Program Reviews (HE)
Accessing ERIC with Your Microcomputer (IR)
Accountability in Counseling (CG)
Accreditation (SP)
Achievement in Mathematics Education (SE)
Achievement in Science (SE)
Active Learning (SO)
Adjustment Problems of Foreign Students in U.S. Colleges and Universities (FL)
Administrative Issues in Planning a Library End User Searching Program (IR)
Administrative Responsibility for Faculty Development (HE)
The Administrator's Role in the Education of Gifted and Talented Children (EC)
The Administrator's Use of Microcomputer Systems (HE)
Adolescent Substance Abuse: Counseling Issues (CG)
Adult Career Development: An Overview (CG)
Adult Development: Implications for Adult Education (CE)
Adult Education for the Handicapped (CE)
The Adult Education Teacher's Role in Career Planning (CE)
Adult Literacy Education (CE)
Adult Literacy Volunteers (CE)
The Advantages of Small Schools (RC)
Aerobic Dance and Exercise Programs (SP)
AIDS: Are Children at Risk? (SP)
Alternative Certification for Teachers (SP)
Alternative Funding Sources for Migrant Education (RC)
Alternatives to Standardized Tests (TM)
American Indian Children's Literature: An Update (RC)
Approaches to Staff Development for Part-Time Faculty (JC)
Are Communications Technologies in Education a Threat to Faculty? (JC)
The Argument for Early Intervention (EC)
Assessing Listening and Speaking Skills (CS)
Assessing Preschooler's Development (PS)
Assessing School Counselor Performance (CG)
Assessing Student Degree Aspirations (JC)
Assessing the Employment Experiences of Community College Vocational Program Graduates (JC)
Assessing the Student Attrition Problem (JC)
Assessment of Minority Students (EC)
At Issue: Free Enterprise Education (SO)
Attention Deficit Disorder (ADD) (EC)
Attitudes, Administrative Styles and Outcomes (HE)
Basic Skills and Corporation-School Alliances (UD)
Behind "A Nation at Risk;" Papers of the National Commission on Excellence in Education (SO)
Being at Ease with Handicapped Children (EC)
Bibliotherapy (CS)
Bilingual Education for Exceptional Children (EC)
Bilingual Vocational Education for Immigrants (CE)
Black Students and Private Schooling (UD)
Building Databases for Education (IR)
Career Development in Adult Education (CE)
Career Education Counseling for Migrant Students (RC)
Career Education for Exceptional Students (EC)
Career Education for the Underemployed (CE)
Career Education in Adult Basic Education (CE)
Career Guidance, Families and School Counselors (CG)
Career Guidance in Two-Year Colleges (CG)
Career Resource Centers (CG)
Career Search for the Gifted and Talented (EC)
Careers in Commercial and Private Recreation (SP)
The Case for Physical Education (SP)
Certification of Teachers of Mathematics (SE)
Characteristics of Children's Play (PS)
Characteristics of Intellectually Gifted Children (EC)
Child Abuse and the Handicapped Child (EC)
Children's Fiction as a Source for Social Studies Skill-Building (SO)
Children's Peer Relationships (PS)
Choice in the Public Schools (EA)
Choosing Software for Children (PS)
Citing ERIC Materials (TM)
Class Size (EA)
Class Size and Writing Instruction (CS)
A Closer Look at Children in Single-Parent Families (UD)
Coaching for Tests (TM)
College Learning Improvement Programs (HE)
College Search Committees (HE)
Commemorating the Bicentennial of the U.S. Constitution (SO)
Communicable Diseases in the Schools (EA)
Communications Technologies in Adult, Career, and Vocational Education (CE)
Community College Faculty and the Transfer Function: A Critical Analysis (JC)
Community College Honors Programs (JC)
The Community College Professor: Teacher and Scholar (JC)
Community Colleges: How to Develop a Positive Liaison with State Lawmakers (JC)
Community Study (SO)
Competency Assessment in Teacher Education (SP)
Components of Teacher Induction Programs (SP)
Comprehensive Guidance Program Design (CG)
Computer-Assisted Instruction: Authoring Languages (IR)
Computer Databases: Applications for the Social Studies (SO)
Computer Equity (IR)
Computer Literacy for Teachers (IR)
Computerized Adaptive Testing (TM)
Contemporary Censorship (SP)
Controversial Issues: Concerns For Policymakers (SO)
Cooperative Learning in Social Studies Education: What Does the Research Say? (SO)
Cooperative Learning in the Urban Classroom (UD)
Correctional Education: Selected Aspects (CE)
Counseling and Educational Excellence: A Response to "A Nation at Risk" (CG)
Counseling for Study Skills (CG)
Counseling Roles & Aids (CG)
Counseling Youngsters for Stress Management (CG)
Counselors and Computers (CG)
Counting the Reverse Transfer Students (JC)
Creating Racial Integration in a Desegregated Magnet School (UD)
Creativity and Counseling (CG)
Creativity and the Creative Process (EC)
A Critical Need for College Student Personnel Services (HE)
Critical Thinking in the Social Studies (SO)
Current Developments in Teacher Induction Programs (SP)
Current Research in Environmental Education (SE)
The Current Status of the Associate Degree (JC)
Curricula for the Gifted and Talented (EC)
Curriculum Change in Secondary School Mathematics (SE)
Data Needs on Teacher Supply and Demand (SP)
Day Care in Schools (EA)
Defining Giftedness (EC)
Deterrents to Participation in Adult Education (CE)
Developing Homework Policies (PS)
Developing Individualized Education Programs (IEPs) for the Gifted and Talented (EC)
Developing Programs for the Gifted and Talented (EC)
The Development of Social Competence in Children (PS)
Development Programs for Academic Administrators: Considerations and Outcomes (HE)
Dismissing Incompetent Tenured Teachers (EA)
Displaced Homemakers (CG)
Displaced Workers (CE)
Distance Education (CE)
Dropout Prevention (EA)
Drug Abuse: Prevention Strategies for School (SP)
Eating Disorders: Counseling Issues (CG)
Economics of Information in Education (IR)
Educating Homebound & Hospitalized Handicapped Children & Youth (EC)
Education and Employment (CE)
Education for High Technology Jobs (CE)
Education on the U.S. Constitution (SO)
Educational Accountability (JC)
Educational Reform Reports: 1983 (UD)
Effective Schools Research and Vocational Education (CE)

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Effects of Career Education on Student Achievement and Retention (CE)
The Effects of Corporate Involvement in Education (SP)
Efforts to Improve Quality: Selected References for Science Educators (SE)
Elderly Parents and Adult Children as Caregivers (CG)
Electronic Networking (IR)
Electronic Networks (IR)
Emergency Teacher Certification (SP)
Employers' Expectations of Vocational Education (CE)
Energy Conservation in Small Schools (RC)
Environmental Education's Definitional Problem (SE)
Equity and Quality in the Use of Computers for Urban Disadvantaged Students (UD)
ERIC for Practitioners (IR)
ERIC: Outdoor Education Resources (RC)
ESL Teacher Certification (FL)
Establishing an Outdoor Education Organization (RC)
Establishing Partnerships Between the Business Community and Rural Schools (RC)
Evaluating Criterion-Referenced Tests (TM)
Evaluating Microcomputer Software (IR)
Evaluation of Gifted Programs (TM)
Evaluation of Programs for the Gifted and Talented (EC)
Evaluation of Student Teachers (SP)
The Evaluation of Teachers (SP)
Excellence in Rural Education: "A Nation at Risk" Revisited (RC)
Excellence through Educational Technology: Some Prior Considerations (IR)
Exploratory Foreign Language Courses in the Middle or Junior High School (FL)
Extending the School Year and Day (EA)
Facilitating Certification and Professional Development for Small Schools (RC)
Faculty Consulting and Supplemental Income (HE)
Faculty Freedoms and Institutional Accountability: Interactions and Conflicts (HE)
Faculty Participation in Decision Making (HE)
The Family-Career Connection (CE)
Family Influences on Employment and Education (CE)
Field Instruction in School Settings (SE)
The Field of Education Technology: A Dozen Frequently-Asked Questions (IR)
Fifteen Years Down, Twenty-Five to Go: A Look at Faculty Careers (HE)
Finding and Keeping Teachers: Strategies for Small Schools (RC)
Finding Information About Tests (TM)
Flexibility in Academic Staffing (HE)
Foreign Language and International Studies High Schools (FL)
Foreign Language Careers: Translation. Q & A (FL)
Foreign Language Organizations (FL)
Foreign Language Teacher Certification (FL)
Foreign Language Teacher Education (FL)
Forming a Local Parent Association for Gifted and Talented Education (EC)
Fostering Peer Acceptance of Handicapped Students (EC)
Full-Day or Half-Day Kindergarten? (PS)
The Gifted and Talented Handicapped (EC)
Gifted and Talented Students: An Overview (EC)
Giftedness & Learning Disabilities (EC)
Grade Retention and Promotion (PS)
Granting Academic Credit for Vocational Education (CE)
Guidelines for Working with Adult Learners (CE)
Handwriting Instruction: What Do We Know? (CS)
Helping Children Cope with Divorce: The School Counselor's Role (CG)
Helping Hispanic Students to Complete High School and Enter College (UD)
Higher Education for Handicapped Students (EC)
Hispanic Culture and Literature: An Overview (RC)
Hispanics and Employment (UD)
Hispanics in Math & Science: Attracting Student Teachers and Retraining Experienced Teachers (RC)
Home Schooling (EA)
How to Find Good Computer Software in English and Language Arts (CS)
How to Make School Desegregation Work--Some Advice from the Research (UD)
How to Plan and Implement Successful Social Studies Inservice Programs (SO)
Human Resource Development: An Introduction (CE)
Humanities in the English Classroom (CS)
Identification of the Gifted and Talented (EC)
The Imperative for Educational Reform: Implications for Special Education (EC)
The Importance of the Educational Resources Information Center for Health and Physical Education Teacher Candidates (SP)
The Importance of the Educational Resources Information Center for Teacher Candidates (SP)
Improvement in Geography Education (SO)
Improving Schooling to Reduce Teenage Pregnancy (UD)
Improving the Mathematical Skills of Minority Students (UD)
Improving the Mathematics Skills of Low Achievers (UD)
Improving the Use of Elementary Social Studies Textbooks (SO)
Increasing Minority Participation in the Teaching Profession (UD)
Instruction in Awareness of Environmental Issues (SE)
Instructional Materials for Improving the Quality of the Environment (SE)
Instructionally Effective Schools (UD)
Integrating the Language Arts (CS)
Interactive Video for Special Education (EC)
Interactive Video in Vocational Education (CE)
Invented Spelling and Spelling Development (CS)
Issues Affecting High School Literature Programs (CS)
Issues in Multicultural Counseling (CG)
Issues in Test Bias (TM)
Job-Related Basic Skills (CE)
Jobs of the Future (CE)
Language Across the Currclulum (CS)
Large Scale Writing Assessment (CS)
Latin American Studies (SO)
Leadership (SO)
Leadership Skills Among the Gifted and Talented (EC)
Learning in the Environment (SE)
The Learning of Mathematics (SE)
Learning the New Basics Through Vocational Education (CE)
Legal Issues in Minimum Competency Testing (TM)
Legal Issues in Testing (TM)
Liberal Arts at the Community College (JC)
Library Censorship (SO)
Limited-English-Proficient Students in the Schools: Helping the Newcomer (FL)
A Look at National and International Environmental Education Conferences (SE)
Mainstreaming (EC)
Managing Computer Software Collections (IR)
Managing Disruptive Student Behavior in Adult Basic Education (CE)
Measurement Implications of "A Nation At Risk" (TM)
Measuring Student Outcomes Through the Associate Degree (JC)
Measuring Teacher Attitudes Toward Mainstreaming (TM)
Mental Retardation (EC)
Mentorships for the Gifted and Talented (EC)
Merit Pay (SP)
Merit Pay for Teachers (EA)
Meta-Analysis Research on Science Instruction (SE)
Metacomprehension (CS)
Methods of Securing Alternative Funding for Community Colleges (JC)
Microcomputer Courseware Evaluation Sources (IR)
Microcomputers and Second Language Teaching. Q & A (FL)
Microcomputers and Young Children (PS)
Microcomputers: Equity and Quality in Education for Urban Disadvantaged Students (UD)
Microcomputers in the School Office (EA)
Migrant Education: A Quick Look at ERIC (RC)
Migrant Student Record Transfer System: What Is It and Who Uses It? (RC)
Minimum Competency Testing (TM)
Minimum Competency Testing and the Handicapped (TM)
Misassignment of Teachers in the Public Schools (SP)
Motivating American Indians into Graduate Studies (RC)
Motivating Teachers for Excellence (EA)
The Multidimensional Problem of Articulation and Transfer (JC)
Museums and Schools as Partners (IR)

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ABSTRACT

For a number of years, the 16 ERIC Clearinghouses have tracked educational issues and trends in their respective special areas of concern. This is the first unified collection of papers resulting from the tracking effort. Each paper contains an analysis of research, practice, and policy in the scope area covered by the authoring Clearinghouse. The chapters also recommend possible actions for achieving improvement and change. The preface by A. Harry Passow is entitled "Issues and Trends in Education: Some Observations and Reflections." The 16 chapters written by Clearinghouse management staff, are as follows (in order by Clearinghouse prefix): (1) CE—"Some Current Issues in Adult, Career, and Vocational Education" by Juliet V. Miller and Susan Imel; (2) CG—"Current Issues and Trends in Guidance and Counseling" by Gary R. Walz; (3) CS—"Two Problems in the Teaching of English" by Charles Suhor; (4) EA—"Improving School Effectiveness through Reform of Teacher Selection Practices and Collegial Observation of Classroom Performance" by Thomas I. Ellis, Mary Cihak Jensen, Philip K. Piele, and Stuart C. Smith; (5) EC—"Current Issues and Future Directions in Special Education" by June B. Jordan and Donald K. Erickson; (6) FL—"Developments in Language Education" by John L. D. Clark; (7) HE—"Emerging Trends in Higher Education" by Judy Diane Grace and Johnathan D. Fife; (8) IR—"Education and Information Technology: What Are the Questions?" by Donald P. Ely; (9) JC—"Contemporary Issues in Community Colleges: A Synopsis" by Arthur M. Cohen; (10) PS—"Current Issues in Early Childhood Education" by Lillian G. Katz; (11) RC—"Issues in American Indian Education, Mexican American Education, Migrant Education, Outdoor Education, Rural Education, and Small Schools" by Elaine Roanhorse Benally, Jack T. Cole, and Manuela Quezada-Aragon; (12) SE—"Persistent Problems in Precollege Mathematics, Science, and Environmental Education: Issues, Trends, and Recommendations" by Robert W. Howe, Patricia E. Blosser, Marilyn N. Suydam, Stanley L. Helgeson, and John F. Disinger; (13) SO—"Core Content, Critical Thinking, and Civil Values: Issues on Education in the Social Studies" by John J. Patrick; (14) SP—"Three Crucial Issues Concerning the Preparation of Teachers for Our Classrooms: Definition, Development, and Determination of Competence" by Elizabeth A. Ashburn; (15) TM—"Current Issues in Testing, Measurement, and Evaluation" by S. Donald Melville, Jacob J. Beard, C. Philip Kearney, Rodney Roth, and Jason Millman; (16) UD—"Issues in Improving Urban Schools: Dropout Prevention, Hispanic Secondary Education, and Urban Teaching Careers" by Erwin Flaxman and Carolyn Riehl. (AA)

Attachment 87-12:
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RIE "Special Announcements"

A Selection from the Past Few Years

NCES Reports on The Condition of Education, 1985

The National Center for Education Statistics announces the release of the 11th annual edition of *The Condition of Education*. Mandated by Congress, this statistical report profiles trends and developments in students and schooling at all levels of education. Special emphasis chapters in the 1985 edition focus on elementary and secondary school teachers, handicapped students, and student transition from high school.

Among the major items reported:

- During the 1970's and early 1980's the proportion of minority enrollment in many of the largest city school systems significantly increased. In some systems, this proportion more than doubled between 1970 and 1982.
- Enrollment in 4-year institutions of higher education is projected to decrease significantly during the 1980's and into the 1990's, while enrollment in 2-year institutions is not expected to decline until the 1990's.
- Between 1970-71 and 1981-82, the number of first-professional degrees awarded in law more than doubled; in medicine they increased by three-fourths. Females increased their representation appreciably across all first-professional fields.
- Public school districts reported an average of fewer than 2 shortages for every 1,000 current teachers in 1983-84. Fields in which greater shortages were reported include bilingual education, some special education sub-areas, physics, and computer science.
- The number of students served in educational programs for the handicapped has increased steadily since 1976-77. The major increase has been for students with specific learning disabilities, while the numbers served in most other handicap categories have actually declined over the same period.
- Higher reentry rates of public high school dropouts were associated with higher socioeconomic status and test performance as well as previous enrollment in an academic curriculum.

Copies of *The Condition of Education, 1985* are available for $10.00 each from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (request stock number 065-000-00241-8). It has also been entered into the ERIC database as accession ED 258 365 and announced in the November 1985 issue of *Resources in Education*. Reproduced copies can be obtained from the ERIC Document Reproduction Service (EDRS): paper copy $21.40, microfiche $.97, plus postage. All EDRS orders should cite the ED number.

ERIC Document Reproduction Service (EDRS) Changes Microfiche Type from Vesicular to Diazo

Beginning with the March 1986 issue of *RIE* (ED-262 152), EDRS will manufacture all ERIC microfiche on a diazo film base (rather than the former vesicular film base). Furthermore, microfiche will be furnished without envelopes, thereby reducing the cost of subscription microfiche to 7.7 cents per fiche. Shipping charges will be reduced about 30% due to the absence of envelopes.

Additional details on the advantages of diazo microfiche are available from EDRS upon request.

Reaching for Excellence: An Effective Schools Sourcebook

In May 1985, the National Institute of Education (NIE) published *Reaching for Excellence: An Effective Schools Sourcebook*. This document summarizes knowledge on school effectiveness in seven chapters written by nationally recognized scholars. Chapters are included on effective classroom practices and effective school practices at both the elementary and secondary levels, on policies at the district and State levels that might influence school effectiveness, and on criteria for measuring school effectiveness. The *Sourcebook* also contains an up-to-date directory describing a number of successful effective schools projects currently being implemented around the country.

It is hoped that this document will assist educators and policy leaders concerned with quality education in our nation's schools.

Original copies may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 at a cost of $9.50, for as long as the supply lasts. Please note the following GPO stock number when ordering: Stock No. 065-000-00230-2.

Microfiche (MF) and reproduced paper copies (PC) are also available from the ERIC Document Reproduction Service (EDRS): MF $0.97; PC $17.90. Please note the ERIC accession number when ordering: ED-257 837.

ASSOCIATION OF AMERICAN COLLEGES RELEASES REPORT ON BACCALAUREATE DEGREE:

Integrity in the College Curriculum: A Report to the Academic Community

The Association of American Colleges (AAC) released on February 11, 1985 the final report of its three-year "Project on Redefining the Meaning and Purpose of Baccalaureate Degrees." The report, entitled *Integrity in the College Curriculum: A Report to the Academic Community*, was prepared by a Select Committee of 18 college and university educators led by AAC President Mark H. Curtis. The Committee sought opinions and perspectives from all facets of higher education, including in-depth responses from eleven selected universities, learned societies, and specialized accrediting organizations.

Featured in the report is a nine-point minimum required curriculum intended to overcome the disarray and "grab bag" qualities that now characterize much of undergraduate education. The elements of the proposed curriculum are:

- Inquiry, Abstract Logical Thinking, Critical Analysis
- Literacy: Writing, Reading, Speaking, Listening
- Understanding Numerical Data
- Historical Consciousness
- Science
- Values
- Art
- International and Multicultural Experiences
- Study In-Depth (of one discipline)

The report is available in original printed copies for a prepaid handling fee of $3.00 from the Association of American Colleges, Box BDP, 1818 R Street, N.W., Washington, D.C. 20009. It has also been entered into the ERIC database (*Resources in Education*, April 1985) and can be purchased in microfiche and/or reproduced paper copy from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Avenue, Alexandria, VA 22304. (MF $0.97, PC $5.65 plus postage; Order # ED 250 059).

BECOMING A NATION OF READERS:

The Report of the Commission on Reading

A nine-member Commission on Reading, sponsored by the National Institute of Education (NIE) and operating under a contract to the National Academy of Education, issued its first report in May 1985. The purpose of the commission was to examine critically the teaching of reading in the United States and to make practical recommendations for improving instruction. The commission found numerous problems with current practice, including poor phonics (relationship between letters and sound) instruction, overemphasis on worksheets and exercises that have little bearing on reading achievement, and too little help for students in reading comprehension. The report makes 17 specific recommendations aimed at producing citizens who will read with a high level of skill.

The report is available for $4.50 (postpaid) from the University of Illinois, "Becoming a Nation of Readers", P.O. Box 2774, Station A, Champaign, IL 61820. It has also been entered into the ERIC database as accession ED 253 865 and announced in the July 1985 issue of *Resources in Education*. Reproduced copies can be obtained from the ERIC Document Reproduction Service (EDRS): paper copy $10.90, microfiche $.97, plus postage. All EDRS orders should cite the ED number.

ERIC Document Reproduction Service (EDRS) Granted Price Increase

Effective October 20, 1986, the ERIC Document Reproduction Service (EDRS) was granted a small price increase. The change is based on increases in the costs of providing the service.

The cost of microfiche obtained via annual subscription was increased from $.075 per fiche to $.078 per fiche (a three mil per fiche increase). The cost of microfiche obtained via on-demand order was increased from $0.75 cents per title (1-5 fiche) to $0.78 cents per title. The cost of reproduced paper copy was increased from $1.80 per 25 page increment to $1.85 per 25 page increment.

The last EDRS price change occurred in October 1984 and was a decrease based on competition. The new prices are still 15-20% below the pre-October 1984 levels.

The details of the price increase are embodied in the new EDRS Order Form, a copy of which appears at the back of this journal. Additional copies of the EDRS order form can be obtained by contacting EDRS directly.

NIE Name Changed

The name of the "National Institute of Education (NIE)" was changed during November 1985 to "Office of Educational Research and Improvement (OERI)". This issue of *Resources in Education* (RIE) reflects this official name change.

New Edition of the ERIC Thesaurus

The 11th edition of the *Thesaurus of ERIC Descriptors* (a list of key words and phrases for indexing documents into the ERIC database and a tool for searching the database) is now available. This edition reflects 224 new Descriptors, several hundred changes to earlier Descriptors, and an extensively revised Introduction entitled "Indexing and Retrieval in ERIC: The 20th Year." Its sturdy cloth, reinforced binding is designed to withstand continuous, heavy use.

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PRICE: $65.00 plus postage. Publisher pays postage if payment is sent with order.

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Educational Research Distilled into Compendium of *"What Works"*

The Department of Education, Office of Educational Research and Improvement (OERI), has published a major new guide to educational research findings that are accurate, reliable, and non-controversial. Entitled *What Works*, the guide lists 41 research findings that can be put to practical use in helping children to learn. Displayed one to a page, each finding is clearly stated and briefly discussed. Major references which support the finding are also presented on the same page.

Up to 10 copies of *What Works: Research About Teaching and Learning* can be obtained free in original form from the Consumer Information Center, Pueblo, Colorado 81009, for as long as the supply lasts. Microfiche and reproduced paper copies can be obtained from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Avenue, Alexandria, VA 22304: MF $.75, PC $7.20. Please cite the ERIC accession number, ED-263 299, when ordering.

ERIC Document Reproduction Service (EDRS) Now Accepting Credit Card Orders

The ERIC Document Reproduction Service (EDRS) announced in March 1987 that, effective immediately, it will permit on-demand orders for ERIC documents in microfiche or reproduced paper copy to be charged to Visa or Mastercard credit cards. Credit card orders will be accepted in any form: telephone, mail or online via the major commercial bibliographic database suppliers (DIALOG, ORBIT, BRS). The convenience of being able to order by telephone, without prepayment and without a deposit account, is something that EDRS customers have long requested and that constitutes a significant improvement in ERIC's document delivery arrangements.

EDRS's complete address and telephone number (800-227-3742) appear on the EDRS order form at the back of each issue of *Resources in Education* (RIE).

First Lessons

A Report on Elementary Education in America

First Lessons, the first comprehensive report on elementary education in the United States in more than 30 years, was released on September 2, 1986, under the signature of Secretary of Education, William J. Bennett.

Assisted by a 21-member Elementary Education Study Group, Secretary Bennett concludes that the nation's elementary schools are in basically good shape, doing their job particularly well in the early grades (grades 1-3). The report focuses on the problems of the later grades and provides recommendations to solve these problems.

First Lessons is available in original printed copies from the Superintendent of Documents, U.S. Government Printing Office (Order number 065-000-00259-1; $4.25). It has also been placed in the ERIC database where it is available in microfiche and reproduced copy from the ERIC Document Reproduction Service (Order number ED 270 236; MF $.75, PC $9.00).

NATIONAL COMMISSION ON EXCELLENCE IN TEACHER EDUCATION

Discussion Papers and Hearing Testimony Now Available

The National Commission on Excellence in Education, whose first report (ED 226 006) was issued in April 1983, has captured the interest and the imagination of the educational community to an unprecedented extent. As a result, it has spawned a series of separate reports on excellence among various subgroups.

During the last half of 1984, a 17-member commission of distinguished educators and political leaders charged with examining *teacher education* and providing a report in early 1985 began a series of five hearings held in major cities across the country. The papers and testimony prepared for these hearings are just now becoming publicly available and ERIC has decided to announce these documents as they are obtained, rather than to wait for the final report.

The first issue of *Resources in Education (RIE)* to contain selected papers from the National Commission on Excellence in Teacher Education was the March 1985 issue. The papers can be found listed in the Institution Index under the name of the Commission and are available from the ERIC Document Reproduction Service (EDRS), 3900 Wheeler Avenue, Alexandria, Virginia 22304. Order by the ERIC accession numbers (ED 250 287-ED 250 317). The Commission final report, *A Call for Change in Teacher Education*, was announced in the May 1985 issue of *RIE* as ED 252 525.

Schools Without Drugs

The U.S. Department of Education, on September 14, 1986, issued a new handbook in the "What Works" series, entitled *Schools Without Drugs*.

This 78-page publication is intended to help schools and communities close the schoolhouse door on illegal substances that disrupt the lives of students and the process of education. It contains a Foreword by First Lady Nancy Reagan, who heads the nationwide "Say No to Drugs" campaign, and an Introduction by Secretary of Education William J. Bennett.

It is being sent to every public and private school system in the nation. Copies are available free from: *Schools Without Drugs*, Pueblo, CO 81009 (or call 1-800-624-0100, in DC 659-4854). The report is also being placed in the ERIC database where it has been assigned the accession number ED 270 715 and where it can be obtained from the ERIC Document Reproduction Service (EDRS) (MF $0.75/PC $7.20). Please cite the ERIC accession number on all EDRS orders.

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ERIC® USERS' INTERCHANGE

May 1990

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The *ERIC Users' Interchange* was prepared by ACCESS ERIC, a project of Aspen Systems Corporation under contract #RI890120 for the Office of Educational Research and Improvement, U.S. Department of Education. Contractors undertaking such projects under Government sponsorship are encouraged to express their judgment in professional and technical matters. Points of view or opinions do not necessarily represent official Department of Education positions or policies. All questions, correspondence, and contributions should be directed to the Editor of the *Interchange*, ACCESS ERIC, 1600 Research Blvd., Rockville, MD 20850, 1-800-USE-ERIC.

I. ERIC System

Since the last issue of the *ERIC Users' Interchange*, ERIC has taken giant steps in meeting its goals of reaching wider and diverse audiences, and of making its products and information more widely used and accessible. For the first time in more than 20 years, new components were added to the ERIC System. In 1989, ACCESS ERIC was established to increase the awareness of and access to ERIC resources and services and to provide a focal point for easy access. Further, ERIC created three Adjunct ERIC Clearinghouses—on Literacy Education for Limited-English-Proficient (LEP) Adults, on Art Education, and U.S.-Japan Studies—to broaden its database on important education topics.

A. ACCESS ERIC Makes Education Information Accessible

ACCESS ERIC is your gateway to ERIC. It helps you understand and use ERIC's resources and services and encourages information sharing among ERIC and its many user groups.

ACCESS ERIC is a comprehensive outreach and dissemination program for the entire ERIC System. The staff of ACCESS ERIC develops and distributes ERIC- and education-related information files, produces System awareness products and publications, provides reference and referral services for the ERIC System, and assesses ERIC products and services.

Reference Services Link You to Education Information

ACCESS ERIC's reference staff is trained to answer questions about the System, help you use the System's services and products, and refer you to experts in the fields covered by the ERIC Clearinghouses. The staff also consults the ACCESS ERIC databases to provide directory assistance and refer you to ERIC Clearinghouses and other organizations in your area of interest.

Through ACCESS ERIC you can receive information about:

- **ERIC Information Service Providers**—Organizations that provide computerized searches of the ERIC database, have a sizable collection of ERIC microfiche, or subscribe to and collect ERIC publications.
- **Education-Related Information Centers**—Resource centers and other organizations that provide information in education-related areas.
- **Education-Related Conferences**—A wide variety of international, national, State, regional, and local education-related conferences for a calendar year.
- **ERIC Training Opportunities and Products**—Information about training opportunities and products involving the use of ERIC products and services.

This information is available in paper copy and on disk at a nominal charge from ACCESS ERIC and will become accessible through an online vendor in the near future. For more information about ACCESS ERIC products, see page 7.

ERIC Partners and Bulletin Board Expand the Information Network

As the outreach component of ERIC, ACCESS ERIC also coordinates the Partners Program for organizations that wish to work with ERIC to help their constituents obtain education information. Partners get free or discounted ERIC products, special assistance from ACCESS ERIC, and opportunities to participate in cooperative projects. In turn, Partners help ERIC distribute information and acquire materials for the database. For information about becoming an ERIC Partner, call ACCESS ERIC at 1-800-USE-ERIC.

The planned ERIC Users' Electronic Bulletin Board will expand ERIC's outreach services by giving users the most current information about ERIC products and services and by announcing

Clearinghouse materials and user training resources and techniques. Users will be able to order selected publications online or download documents to a personal computer.

B. Three Adjunct Clearinghouses Established

ERIC established three new national Adjunct Clearinghouses in 1989. Like the ERIC Clearinghouses, these Adjunct Clearinghouses collect, analyze, abstract, index, and enter documents from their scope area into the ERIC database, publish information analyses, and provide reference services. The new Adjunct Clearinghouses are:

- **Literacy Education for Limited English Proficient (LEP) Adults.** Associated with the ERIC Clearinghouse on Languages and Linguistics, this Adjunct Clearinghouse links public and private institutions, agencies, and community groups concerned with literacy issues for LEP adults and out-of-school youth. It also provides technical assistance in program design, curriculum development, materials adaptation, diagnosis and assessment, and training. One of its first products will be a directory of literacy programs in the United States.

  For more information write to the Adjunct ERIC Clearinghouse on Literacy Education, Center for Applied Linguistics, 1118 22nd Street NW., Washington, DC 20037 or call (202) 429-9292.

- **The National Clearinghouse for U.S.–Japan Studies.** Funded by the U.S.-Japan Foundation, this Adjunct Clearinghouse offers a variety of services and products dealing with relationships between the two countries. Topics include Japanese culture and society, business and trade issues, comparative educational systems, and experiences of Japanese nationals living in the United States. The Clearinghouse maintains a searchable database of commercially-published and teacher-developed curriculum materials, journal articles, research reports, and other information. It also publishes bibliographies, research summaries, and other materials.

  For more information write to the ERIC Clearinghouse for Social Studies/Social Science Education, Indiana University, Social Studies Development Center, 2805 East 10th Street, Suite 120, Bloomington, IN 47408-2698, or call (812) 855-3838.

- **The Adjunct Clearinghouse for Art Education.** This Adjunct Clearinghouse is funded by the Getty Center for Education in the Arts and focuses on major education topics in visual arts, including painting, drawing, photography, weaving, ceramics, and sculpture. Emphasis is given to significant trends and new developments in discipline-based art education, including art production, art history, art criticism, and aesthetics.

  For more information write to the ERIC Clearinghouse for Social Studies/Social Science Education, Indiana University, Social Studies Development Center, 2805 East 10th Street, Suite 120, Bloomington, IN 47408-2698, or call (812) 855-3838.

C. ERIC Digests Are Available

ERIC Digests are short reports on topics of current interest in education. Covering a wide range of topics, Digests offer an overview and include references to more detailed information. While developed specifically for teachers, administrators, policymakers, and other practitioners, the Digests are also useful to the broader education community. Digests are available in printed form from ERIC Clearinghouses. This issue of *Interchange* includes seven ERIC Digests developed by the ERIC Clearinghouse on Information Resources. The Digests can be found in Appendix A. For more information about ERIC Digests, call the ERIC Processing and Reference Facility at (301) 258-5500.

ERIC Digests Go Online

You may also access ERIC Digests electronically through the ERIC DIGEST ONLINE file (EDO). This file contains the complete text of selected, recent ERIC Digests (about 470 Digests at present), along with their citations. Currently available to users of DIALOG or the PLATO system at the University of Illinois, Champaign-Urbana, the EDO file will be available to other information utility systems in the near future.

D. Publications From the ERIC Clearinghouse on Information Resources

Periodically the *Interchange* will feature ERIC Clearinghouse publications considered current and usefull to its readers. This issue includes a list of such publications available from the ERIC Clearinghouse on Information Resources.

Trends and Issues in Library and Information Science 1988
Michael B. Eisenberg, Carolyn K. Trombly, and Lindsay D. Ruth
IR-81 ($4.00 plus $1.50 postage and handling)

This monograph identifies and describes education-related trends and issues in the library and information fields. The authors offer useful insights into present concerns and anticipate future developments such as the impact of computer technology on the profession. Topics include technical developments, management, services, personnel, and research/theory.

Online Information Services for Secondary School Students, second edition
Elizabeth Smith Aversa, Jacqueline C. Mancall, and Diane Oesau
ED308883 ($9.95 plus $1.50 postage and handling)

This guide reviews the literature on online searches in school library media centers. The authors present guidelines for planning and implementing online access for students. They also summarize results of a 1986 survey of online providers in the schools and include an updated annotated bibliography of materials published through the 1980s.

Online Information Services for Secondary School Students: A Current Assessment
(ERIC Digest)
Elizabeth Smith Aversa, Jacqueline C. Mancall, and Diane Oesau
ED303175 (Free while supply lasts)

This Digest discusses the current status of online searching in schools and outlines the advantages and disadvantages of online access. The authors suggest ways school library media specialists can initiate online information retrieval for their students. They also review studies on how online services affect student behavior and describe a scenario for future online services in school settings.

Online Information Services for Secondary School Students: A Current Assessment
(ERIC Information Analysis Product)
Elizabeth Smith Aversa, Jacqueline C. Mancall, and Diane Oesau
ED295682 ($6.50 plus $1.50 postage and handling)

This analysis of online searching in school library media centers is drawn from current literature and a 1986 survey of school-based online providers and vendors. While not widely covered by the literature, the survey showed online searching was growing in schools across the country. Findings are reported and compared in three major areas: people, policies, and practice. An annotated bibliography includes recently published materials that describe programs and provide guidelines for implementing online searching in the schools. An appendix includes the survey instruments and a directory of major vendors working with school media specialists.

To order these publications contact the ERIC Clearinghouse on Information Resources, Syracuse University, School of Education, Huntington Hall, Room 030, 150 Marshall Street, Syracuse, NY 13244-2340, (315) 443-3640.

E. Services To ERIC's Standing Order Customers (SOCs)

ERIC Standing Order Customers (SOCs) are part of an ongoing information network that links ERIC, libraries, and other information centers. Through the SOC program, more than 825 libraries and information centers receive Clearinghouse materials to help them provide services and training about ERIC.

Each of the 16 ERIC Clearinghouses provides user services to the SOCs within a specific geographic area. Services vary by Clearinghouse, but generally include annual update letters, newsletters and bulletins, training workshops, and general information packets. For more information about the SOC program, contact the ERIC Clearinghouse responsible for your geographic area:

- **Alabama, Kentucky, Mississippi, Tennessee**

  Adult, Career and Vocational Education
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  610 East University Street
  Ann Arbor, Michigan 48109-1259
  (313) 764-9492 FAX: (313) 747-2425

- **Alaska, Hawaii, Idaho, Montana, Oregon, Washington, Alberta (Canada), British Columbia (Canada), Saskatchewan (Canada)**

  Educational Management
  University of Oregon
  1787 Agate Street
  Eugene, Oregon 97403-5207
  (503) 346-5043 FAX: (503) 346-5890

- **Illinois, Iowa, Kansas, Missouri, Nebraska, South Dakota**

  Elementary and Early Childhood Education
  University of Illinois
  College of Education
  805 West Pennsylvania Avenue
  Urbana, Illinois 61801-4897
  (217) 333-1386 FAX: (217) 333-5847

- **Florida, Georgia**

  Handicapped and Gifted Children
  Council for Exceptional Children
  1920 Association Drive
  Reston, Virginia 22091-1589
  (703) 620-3660 FAX: (703) 264-9494

- **Delaware, Pennsylvania, Puerto Rico, Virgin Islands**

  Higher Education
  George Washington University
  One Dupont Circle, NW., Suite 630
  Washington, D.C. 20036-1183
  (202) 296-2597 FAX: (202) 296-8379

- **New York (Upstate), New Brunswick (Canada), Newfoundland (Canada), Nova Scotia (Canada), Quebec (Canada)**

Information Resources
Syracuse University
Huntington Hall, Room 030
150 Marshall Street
Syracuse, New York 13244-2340
(315) 443-3640 FAX: (315) 443-5732

- **California, Nevada, Guam**

Junior Colleges
University of California at Los Angeles
Math-Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024-1564
(213) 825-3931 FAX: (213) 206-8095

- **North Carolina, South Carolina, Virginia**

Languages and Linguistics
Center for Applied Linguistics
1118 22nd Street, NW.,
Washington, D.C. 20037-0037
(202) 429-9551 FAX: (202) 429-9766

- **Indiana, Wisconsin**

Reading and Communication Skills
Indiana University
Smith Research Center, Suite 150
2805 East 10th Street
Bloomington, Indiana 47408-2698
(812) 855-5847 FAX: (812) 855-7901

- **New Mexico, Texas, West Virginia**

Rural Education and Small Schools
Appalachia Educational Laboratory
1031 Quarrier Street, P.O. Box 1348
Charleston, West Virginia 25325-1348
(800) 624-9120 (Outside WV)
(800) 344-6646 (In WV)
FAX: (304) 347-0487

- **Arkansas, Louisiana, Ohio**

Science, Mathematics and Environmental Education
Ohio State University
1200 Chambers Road, Room 310
Columbus, Ohio 43212-1792
(614) 292-6717 FAX: (614) 292-4315

- **Arizona, Colorado, Oklahoma, Utah, Wyoming**

Social Studies/Social Science Education
Indiana University
Social Studies Development Center
2805 East 10th Street, Suite 120
Bloomington, Indiana 47408-2698
(812) 855-3838 FAX: (812) 855-7901

- **District of Columbia, Maryland**

Teacher Education
American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, NW., Suite 610
Washington, D.C. 20036-2412
(202) 293-2450 FAX: (202) 457-8095

- **Massachusetts, New Jersey, Rhode Island**

Tests, Measurement, and Evaluation
American Institutes for Research
Washington Research Center
3333 K Street, NW.
Washington, D.C. 20007
(202) 342-5060 FAX: (202) 342-5033

- **Connecticut, Maine, New Hampshire, New York (Downstate), Vermont**

  Urban Education
  Teachers College, Columbia University
  Institute for Urban and Minority Education
  Main Hall, Room 300, Box 40
  525 West 120th Street
  New York, New York 10027-9998
  (212) 678-3433 FAX: (212) 678-4048

II. News From Support Contractors

A. ACCESS ERIC

New Titles

ACCESS ERIC has developed several resources for the education community, including:

- *1990 ERIC Calendar of Education-Related Conferences.* This publication lists a wide variety of international, national, State, regional, and local education-related conferences scheduled for 1990. The *Calendar* features five indexes that quickly and easily identify conferences of interest. You can search by conference name, date, geographic location, sponsor, and subject.

  ACCESS ERIC invites you to announce your upcoming conference, meeting, or seminar in the *Calendar.* Submit conference information with a conference brochure or information packet to ACCESS ERIC, 1600 Research Blvd, Rockville, MD 20850.

  Appropriate events will be listed as space allows.

  The *Calendar* is available for $12. To order, call 1-800-USE-ERIC.

- *Directory of ERIC Information Service Providers.* Compiled from online databases, the *Directory* lists more than 900 organizations that offer access to the ERIC database and related resources. It includes organizations that provide computerized searches of the ERIC database on a regular basis, maintain sizeable collections of ERIC microfiche, and subscribe to as well as collect ERIC publications. An update of the 1986 version, the *Directory* contains expanded information on hours of operation and charges for special services. It also contains a new alphabetical index of organizations for additional reference assistance.

  The *Directory of ERIC Information Service Providers* is free. To order, call 1-800-USE-ERIC.

- *ERIC Directory of Education-Related Information Centers.* This all new *Directory* lists nearly 200 public and private education-related organizations that provide information syntheses, database building, outreach, and user services. These organizations may also offer information and provide reference and referral services, online searches, technical assistance, and publications. Organizations are arranged alphabetically, and each entry is preceded by an identification number to make access through the indexes easier. The *Directory* contains three indexes—master organization, subject, and geographical.
  Organizations wishing to either update their entries or be listed in future editions should call 1-800-USE-ERIC.

  The *ERIC Directory of Education-Related Information Centers* is $10.00. To order, call 1-800-USE-ERIC.

- *Directory of ERIC Training Opportunities and Products.* ACCESS ERIC is now collecting information for the training and products database and *Directory.* This *Directory* will help users identify available ERIC resources, conduct ERIC training, and create training bibliographies and resource lists. If your organization provides structured classes on searching the ERIC database, training manuals developed to teach ERIC search techniques, instructional documents for accessing the ERIC System, or similar types of ERIC training opportunities or products, please contact ACCESS ERIC at 1-800-USE ERIC. Appropriate training opportunities and products will be added as space allows.

Free Information Resources for ERIC Users

The following ACCESS ERIC Systemwide publications help you understand and use ERIC by providing information about current education-related issues and research.

- *Catalog of ERIC Clearinghouse Publications*—A complete listing, including prices, of publications produced by the ERIC Clearinghouses and Support Components.
- *The ERIC Review*—A quarterly journal to keep you informed about important ERIC- and education-related developments. It features publications and research findings from the U.S. Department of Education, Office of Educational Research and Improvement, and the ERIC Clearinghouses; announces recent acquisitions to the ERIC database, top sellers, and other new education publications; lists education-related conferences, meetings, and seminars; and highlights new ERIC products and services. The first issue will be published in the summer of 1990, and regular quarterly issues will be available in the fall.
- *A Pocket Guide to ERIC*—A brief description of ERIC resources that is a quick reference to commonly asked questions. The revised *Pocket Guide's* easy-to-use booklet format gives telephone numbers of important information sources and includes a directory of ERIC Clearinghouses.
- *All About ERIC*—A reference tool that gives a detailed description of the ERIC System. *All About ERIC* explains how to use ERIC products and services and contains information on how organizations can become ERIC Partners. It also gives information on searching the ERIC database, obtaining ERIC documents, and submitting documents to the database.

To order these free publications, call 1-800-USE-ERIC, Monday through Friday, 8:30 a.m. to 5:30 p.m. (eastern time). Bulk quantities are available on request to schools, libraries, and other organizations.

B. ERIC Document Reproduction Service (EDRS)

Expedited Delivery Service

Normally, you can receive ERIC documents in 5 working days. To expedite delivery, you can use one of the following methods:

- Call toll-free, 24 hours a day: 1-800-227-ERIC.
- Place and receive your order via FAX, 24 hours a day: 703-823-0505. You can receive a FAXed document within 24 hours!
- Order via computer: 703-823-0504 (after 5 p.m. eastern time). If you have a computer and a modem, call and follow the menu on the "ERIC After Hours" screen.

For quickest delivery, request one of the following delivery services:

- USPS Express Mail
- Federal Express
- UPS Next Day Air
- FAX (A service charge of $2.00 per document and the FAX transmission charge will be added to the cost of the documents.)

You may continue to order through mail or online vendors (DIALOG, OCLC, BRS/ORBIT). The EDRS processing time for mail orders is 5 working days. The processing time for orders received via online vendors is 3 working days.

ERIC After Hours: Direct Online Ordering Service

An online ordering service now allows you to order from a personal computer from home, school, or office. Simply dial EDRS and enter your order directly into the EDRS order fulfillment service. The service is available between 5:00 p.m. and 8:30 a.m. (eastern time).

For more information about ERIC After Hours call EDRS at 1-800-227-3742 or write to ERIC Document Reproduction Service, 3900 Wheeler Avenue, Alexandria, VA 22304-6409.

New Products Available

Two products of special interest are available from the ERIC Document Reproduction Service——the ERIC Starter Kit and microfiche equipment.

- **The ERIC Starter Kit**—This collection of materials is designed to meet the needs of schools and libraries with limited funds. The Kit contains:

  —All ERIC document abstracts (resumes) and cumulative indexes 1966–1988, on microfiche—a total of 1,008 microfiche.

  —The *1990 Directory of ERIC Information Service Providers*, which lists institutions worldwide holding ERIC microfiche collections and offering ERIC information services. The *Directory* includes the name, address, telephone number, and contact person for each location.

  —Information on support services, which describes how to order by MasterCard or VISA credit card, establish deposit accounts, and order and receive documents by FAX. You will also receive information from an ERIC advisor who will assist your institution in establishing an ERIC collection of documents.

  The ERIC Starter Kit is $165.00 plus shipping. Annual updates are $105 and include yearly ERIC microfiche indexes and annual resumes. An optional Micron 425 microfiche viewer, with 24x and 42x dual lens capability is also available as part of the Kit. It is $285.00 plus shipping. A 240-volt electrical system option is an additional $20.

- **Microfiche File Cabinets**—Microfiche cabinets can solve the problem of growing microfiche collections. The FENCO Model 1830 file cabinet has a storage capacity of 129,000 microfiche and measures 21 1/4" wide by 58 1/2" high. Entire collections can be stored in only three of these cabinets, which occupy only 15 square feet of space. Another cabinet, Model 1838, has eight drawers and holds approximately 100,000 microfiche. Model 1830 retails for $1,547, but is now $1,117. Model 1838 retails for $1,357, but is now $963.

- **Microfiche Reader/Printer**—Computer Microfilm Corporation, operator of EDRS, offers a Micro Copy 1000 Plain Paper Reader/Printer for $2,995. You will also receive a free Micron 780A Microfiche Reader as a special bonus.

For additional information or to place an order, please write to EDRS, 3900 Wheeler Avenue, Alexandria, VA 22304-6409 or call EDRS at 1-800-227-3742.

New Online Ordering of ERIC Documents Through OCLC Interlibrary Loan (ILL) Subsystem

Appendix B describes how to order ERIC Documents through the OCLC Interlibrary Loan (ILL) Subsystem.

C. Oryx Press

Oryx Press Is Moving

As of June 1, 1990, Oryx Press' new address is 4041 North Central Avenue, Suite 700, Phoenix, AZ 85012. The new phone numbers are (602) 265-2651 and 1-800-279-ORYX. To order publications before June 1, call 1-800-457-ORYX.

New Titles

Oryx Press announces the following new titles:

- *Thesaurus of ERIC Descriptors, 12th Edition*—The 1990 edition of the *Thesaurus of ERIC Descriptors* will be available July 31, 1990. It provides additional access to 280 new terms recently added to ERIC's controlled vocabulary. Tentative prices for the *Thesaurus* are $69.50 in North America and $83.40 elsewhere, plus postage. ORYX Press pays the postage if you enclose payment with the order. The new *Thesaurus* is 8 1/2 x 11, clothbound, and is 640 pages. ISBN: 0-89774-561-2.

- *Resources in Education: 1989 Annual Cumulation*—This three-volume set provides complete coverage of the important topics in education, from teacher burnout to curriculum design. *RIE 1989 Annual Cumulation* assembles a full year of information from *Resources in Education*, ERIC's monthly journal. The two-volume *Abstracts* features complete bibliographic information and a concise 200-word abstract of each document. The one-volume *Index* cross-references the documents and report literature with the cumulated subject and author indexes.

  Resources in Education includes research reports, technical reports, speeches, unpublished manuscripts, and books. This complete educational reference system meets the information needs of teachers, administrators, librarians, and researchers. For your convenience, you can subscribe separately to either the two-volume *Abstracts* or the one-volume *Index*. Each sturdy, clothbound volume is printed on acid-free paper for maximum shelf-life.

  Save 5 percent off the regular subscription price by placing a standing order. For the third straight year, domestic subscription rates for this publication have not increased.

- *Current Index to Journals in Education*—*CIJE* gives you quick, convenient, monthly access to the very latest education information from over 700 periodicals. More than just an index, *CIJE* describes 1,500 journal articles covering the entire spectrum of education.

  Information in *CIJE* comes from the nationwide network of ERIC Clearinghouses. Each specializes in a different area of education and works to identify literature that will help you develop more effective educational programs and strategies.

  No other publication puts such a wide range of materials within easy reach of teachers, administrators, researchers, and librarians. *CIJE* explores the major topics of interest and concern, the latest research and theory.

- *CIJE: Semiannual Cumulation*—The *CIJE Semiannual Cumulations* now contain a list of the journals indexed in *CIJE* by Clearinghouse as well as alphabetical order. These journal lists, called "Source Journal Index—Arranged by Clearinghouse" and "Source Journal Index—Arranged by Title," will continue to appear in each semiannual cumulation.

Back Issues and Microfiche Available

Back issues of the *RIE Annual Cumulations*, still available in limited quantities, are valuable research tools. When clothbound sets are sold out, all editions become available on microfiche.

You can even order *Current Index to Journals in Education* (*CIJE*) and *RIE* combined subject indexes on microfiche to expand your education collection. For more information, call our Customer Service department: 1-800-457-ORYX. (1-800-279-ORYX after June 1, 1990.)

D. ERIC Processing and Reference Facility

ERIC Ready References

Ready References, brief one-page discussion sheets, were introduced by the ERIC Processing and Reference Facility in 1980. Twelve have been issued. Each one provides succinct information on a single well-defined ERIC database-related topic. Ready References are excellent attachments for reference information responses.

ERIC Ready Reference No. 1 contains a year-by-year listing of ERIC accession number ranges for both RIE and CIJE. Printed in large typeface, the information can be posted on the wall near computer terminals to give operators ready access during searches of the ERIC database.

Many Ready References are updated annually at the end of the publication year. They are generally revised and distributed in bulk to the ERIC Components at the beginning of the next year.

A Ready Reference on document delivery is currently being evaluated. We welcome your ideas for new Ready References. The titles of all Ready References issued to date are:

*1: ERIC Accession Number Ranges (by year)
*2: ERIC Publication Types
*3: RIE Resume (Sample)
4: How to Use the Thesaurus of ERIC Descriptors for an Effective ERIC
*5: ERIC Price Codes
*6: ERIC Clearinghouses (and other network components)
*7: ERIC Factsheet (Annual)
8: Target Audience
9: ERIC Digests (Being revised)
10A: ERIC Digests (A complete list of all ERIC Digests arranged by Clearinghouse)
10B: ERIC Digests (A complete list of all ERIC Digests arranged by title)
*11: ERIC Microfiche Statistics
12: ERIC Telephone Directory (September 1989)

* Copies of these Ready References are in Appendix C.

Appendix A

ERIC Digests

ERIC Clearinghouse on Information Resources

Syracuse University
School of Education • School of Information Studies
030 Huntington Hall
Syracuse, New York 13244-2340
(315) 443-3640

ERIC DIGEST

December 1988

EDO-IR-88-12

NEW ACCESS POINTS TO ERIC. An Update. Part III

ERIC/IR Special Projects

B. J. Vaughn and Michael B. Eisenberg

The need and demand for educational information continues to grow. Researchers, teachers, administrators, community members, and students are all actively engaged in seeking and using information related to education. The ERIC Clearinghouse on Information Resources has attempted to respond to this increasing demand by offering new access points to the existing ERIC database as well as alternative information resources aimed at a range of users. This digest summarizes some emerging points of access to the ERIC system.

ERIC MICROsearch

The ERIC Clearinghouse on Information Resources (ERIC/IR) continues to provide microcomputer-based access to ERIC through its MICROsearch program. ERIC MICROsearch is a software program which runs on the IBM and Apple family of microcomputers. It allows the user to search selected portions of the ERIC database which have been stored on floppy disks. Every three months, ERIC/IR downloads its own input to the ERIC database in the subject areas of library/information science and educational technology. Each subject area diskette contains between 350 and 400 citations of the most recent entries in the database. These database disks are searched using a system that provides an easy to use interface with three searchable indexes: Basic (including descriptors and keywords from the descriptor and identifier fields); Descriptor (containing the ERIC controlled vocabulary); and Authors. The Boolean operators AND, OR, and NOT can be used to define search strategies. Many sites use the demonstration disks and subscription service to teach online searching of the ERIC database without the costs of telephone lines and vendors' service charges.

The ERIC/IR Electronic Bulletin Board

Another access service provided by ERIC/IR is the computerized bulletin board system. This system provides a forum for teachers and other education professionals to express their concerns, ask questions, and/or submit ideas, and to receive feedback from others in their field as well as from experts at the ERIC/IR Clearinghouse. Users can leave a question (e.g., Does anyone have any good source materials that can be used with handicapped adults?). Others using the Bulletin Board are free to comment or express ideas, give answers from their own experience, or offer to share source materials. The Bulletin Board offers Bulletins, File Transfers, and Electronic Mail. The Bulletins provide brief descriptions of clearinghouse activities such as ERIC on CD-ROM, ERIC search services, ERIC MICROsearch, free ERIC publications, and other ERIC/IR publications. The ERIC Bulletin Board maintains a list of public domain files that can be downloaded, and users are encouraged to upload any public domain files they want to share with other bulletin board users.

Local Mainframe Access

An alternative to providing computer access to ERIC through vendors is to offer local access through a mainframe computer system. Computer tapes of the ERIC database are available from the ERIC Processing and Reference Facility. Arrangements need to be made locally for loading the database onto a mainframe computer system as well as for providing access to the database with information retrieval software. Any university, academic library, education laboratory or center, or institution can set up this service on a mainframe computer starting with the purchase of the ERIC tapes.

Syracuse University, for example, uses an information retrieval system called SPIRES with a simplified user interface called PRISM to offer mainframe access to a number of databases. Developed at Stanford University, SPIRES/PRISM provides a menu approach to access that end-users are able to use with minimal training. PRISM allows for Boolean searching and continuing refinement of searches. Through PRISM, Syracuse University students and faculty have direct access through the university mainframe to more than four years of the entire ERIC database, and the database files are updated each quarter. Anyone in the Syracuse community with an account on the mainframe at Academic Computing Services can access this information using a wired-in terminal or a microcomputer with communications software and full screen capability.

A sample ERIC session using PRISM is shown on the following page.

Summary

The ERIC system strives to improve access and meet the needs of different constituencies through all these access points, and further efforts are promised for the future. Most significantly, a new component called ACCESS ERIC will be added to the ERIC system in 1989. Its purpose is to provide a central point for ERIC users to ask questions and obtain information. It is hoped that all the access points noted above will be more consistently used and information will be more widely disseminated by the marketing and publicity efforts of this new entity.

PRISM Search of ERIC

```
ERIC Search  01/29/88  10:19
Search:  DESC CHILD# AND TELEVISION  -Record 7 of 238

Accession: EJ354579
Title: Young Children's Memory for Televised Stories:  Effects of Importance.
Journal: Child Development; v58 n2 p453-63 Apr 1987
Author: Lorch, Elizabeth Pugzles; And Others
Pub Date: 1987
Abstract: Effects of the importance of plot-relevant information on 4- to 6-year old children's memory for four televised stories was
examined in two experiments. Free recall and cued recall of idea units rated for importance by college students were assessed.
(Author/BN)
Major Descriptors:  Memory; recall (Psychology); Recognition (Psychology); Television Research; Young Children
Other Descriptors: Cognitive Development; Educational Television
-This record continues next page; you may press RETURN to continue display

To see records: type DISPLAY followed by a record number.
To see another full record: type DISPLAY FULL followed by a record number.
To begin a new search: type FIND
To choose a different file: type SELECT
YOUR RESPONSE:
f1=Help        f2=Find        f3-Select      f4=Display     f9=Print                      f10=Option
Esc-chr:^]     help:^]?       port:1         speed: 9600    parity: even                  echo:rem VT102

ERIC           Search                                       01/29/88 10:19
```

ERIC/IR Special Projects

MICROsearch/Apple	Information Resources Publications 030 Huntington Hall Syracuse University Syracuse, NY 13244-2340 (315) 443-3640	Demonstration set includes program disk, manual, and a database disk (please indicate subject—either library/information science or educational technology). Contact ERIC/IR for prices.	$20.00
MICROsearch/IBM	Information Resources Publications 030 Huntington Hall Syracuse University Syracuse, NY 13244-2340 (315) 443-3640	Demonstration set includes program disk, manual, and a database disk (please indicate subject, either library/Information science or education technology). Contact ERIC/IR for prices.	49.00
ERIC/IR Bulletin Board	ERIC/IR Clearinghouse 030 Huntington Hall Syracuse, NY 13244-2340 (315) 443-1049	For further information, contact Jane Klausmeier Janis at ERIC/IR: (315) 443-3640.	
ERIC/Prism/SU	SU contact: Astrid Pettersen 315-443-1145	Please see ERIC TAPES*	

As of March 1, 1989

*ERIC Tapes	ERIC Processing Facility ORI, INC. 2440 Research Boulevard Rockville, MD 20850 (301) 590-1420	RIE 1966-present; CIJE 1969-present. Files may be purchased individually or as a collection. Please contact ERIC Facility for more information. Prices per tape start as low as	75.00

This digest was prepared for the ERIC Clearinghouse on Information Resources by B. J. Vaughn, Acquisitions Director, and Michael Eisenberg, Associate Director. December 1988.

OERI
Office of Educational Research and Improvement
OR-CS-LP-RP-8

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ERIC

ERIC Clearinghouse on Information Resources

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School of Education • School of Information Studies
030 Huntington Hall
Syracuse, New York 13244-2340
(315) 443-3640

ERIC DIGEST

December 1988

EDO-IR-88-11

NEW ACCESS POINTS TO ERIC: AN UPDATE. Part II.
CD-ROM and Other New Access Points

B. J. Vaughn and Michael B. Eisenberg

The need and demand for educational information continues to grow. Researchers, teachers, administrators, community members, and students are all actively engaged in seeking and using information related to education. The ERIC system has encouraged the private sector to use the system and make information available through commercial products aimed at a range of users. This digest summarizes some of these emerging points of access to the ERIC system.

CD-ROM (Compact Disk–Read Only Memory)

An alternative to remote access through online utilities is to purchase ERIC on CD-ROM. Another ERIC Digest, *ERIC on CD-ROM: Update* (EDO-IR-88-1), lists advantages and disadvantages of CD-ROM use. This Digest is available free of charge from the ERIC Clearinghouse on Information Resources (include a self-addressed, stamped enveloped with a request). Currently, there are three CD-ROM versions of the ERIC database available commercially. A comparison of these three systems is provided on the following page.

ERIC Digests Online

ERIC Digests Online (EDO) is a special project of the ERIC Clearinghouse on Early Childhood Education. Digests are one-page reports on topics of prime current interest in education. Each of the 16 ERIC Clearinghouses provides these reports. They are targeted specifically for teachers, administrators, policymakers, and other practitioners, but are also useful to the general community. They are designed to provide an overview of information on a given topic, with references providing sources of more detailed information. The original printed form is available from the clearinghouse which produced it and through the ERIC Microfiche Collection. The ERIC Digest Online (EDO) file is a full-text database, and at least 10 new digests are added to the database each month. As of October 1988, there were 360 digests available.

Work is underway to make the EDO database available through Dialog and GTE Education Services (2021 K Street NW, Washington, DC 20006, tel. 202-835-7300).

PRINTED SOURCES

Over the past few years, information about ERIC has appeared in various standard reference tools of the information profession. For example, *Books in Print* lists the ERIC/IR Clearinghouse as an entry to the ERIC system and provides a contact for information concerning publications; the *Vertical File Index* is informed about free and inexpensive ERIC publications. These efforts provide greater access to the ERIC database for teachers, library media specialists, public librarians, and parents.

In addition, the ERIC Clearinghouses inform the professional associations in their respective scope areas on a regular basis of the materials they are producing. This material is often placed in information packets at conferences, and in offices of members of these associations.

Education editors of nationally distributed newspapers are sent press releases of ERIC/IR products and informed about the projects and publications of the ERIC system. Popular parenting magazines, computer magazines with a family emphasis, and other education journals provide information about ERIC to the general public.

SUMMARY

The ERIC system strives to improve access and meet the needs of different constituencies through all these access points, and further efforts are promised for the future. Most significantly, a new component called ACCESS ERIC will be added to the ERIC system in 1989. Its purpose is to provide a central point for ERIC users to ask questions and obtain information. It is hoped that all of the access points noted above will be more consistently used and information will be disseminated more widely by the marketing and publicity efforts of this new entity.

This publication was produced for the ERIC Clearinghouse on Information Resources by B. J. Vaughn, Acquisitions Director, and Michael Eisenberg, Associate Director. December 1988.

Comparison of CD-ROM Systems

Features	DIALOG	OCLC	SilverPlatter
Current disc	1980–present; combined file of RIE and CIJE on one disc.	1982–present; separate files of RIE and CIJE	1983–present; combined file of RIE and CIJE
Archival discs	1966–1979 on one disc; RIE & CIJE in combined file.	RIE 1967-1976; RIE 1977-1981; CIJE 1969-1981; on separate discs	RIE & CIJE 1966-1975; RIE & CIJE 1976-1982; on two discs
Hardware	IBM PC, or compatible. 512K RAM (640 recommended hard disk storage with minimum 1MB free space). Hayes compatible modem. Color monitor. Printer.	IBM PC, or compatible. 512K RAM. Printer.	IBM PC, or compatible. 512K RAM. Printer.
CD drives	Any CD-ROM drive that supports MicroSOFT extension version 2.00 or higher.	Philips, SONY, Hitachi, or Amdec.	Hitachi, SONY, Philips, or Toshiba.

OERI Office of Educational Research and Improvement

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ERIC

ERIC Clearinghouse on Information Resources

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School of Education • School of Information Studies
030 Huntington Hall
Syracuse, New York 13244-2340
(315) 443-3640

ERIC DIGEST

December 1988

EDO-IR-88-10

ACCESS POINTS TO ERIC: AN UPDATE. Part I.

Online Access Through Vendors

B. J. Vaughn and Michael B. Eisenberg

The need and demand for educational information continues to grow. Researchers, teachers, administrators, community members, and students are all actively engaged in seeking and using information related to education. The ERIC system has attempted to respond to this increasing demand by offering new access points to the existing ERIC database as well as alternative information resources aimed at a range of users. This set of three digests summarizes the traditional, new, and emerging points of access to the ERIC system.

Traditional Print Access

Manual, non-computerized access to the ERIC database is available through two printed indexes: *Resources in Education* (RIE) and *Current Index to Journals in Education* (CIJE). RIE is an index to reports, papers, conference proceedings, bibliographies, manuals, handbooks, state-of-the-art studies, and other materials that do not appear in journals. The full text of most documents listed in RIE is reproduced and made available on microfiche. CIJE is an index to articles that appear in education journals. RIE and CIJE are published monthly and cumulated in semiannual indexes. These indexes are usually available wherever an ERIC microfiche collection is located. Many libraries and educational laboratories and centers also maintain collections of the printed indexes even when they do not have the ERIC microfiche collection. The user who does manual searches of ERIC comes to know what the system has to offer and how to locate desired materials, knowledge which can be invaluable when using more sophisticated approaches, such as online searching, for more complex computerized searches.

Online Access Through Commercial Vendors

Computer access to RIE and CIJE is provided by the major online vendors: Dialog, BRS Information Technologies, and Orbit. Searching through online vendors is generally done by librarians or other expert search intermediaries. However, online vendors are becoming increasingly interested in providing various end-user groups with direct access to ERIC and other databases. Targeted end-user groups include researchers, students, faculty, and others with personal computers at home. Online vendors are also interested in providing services to end-users in schools, often through library media centers. Special programs targeted at these user populations include BRS After Dark, Einstein, and Dialog's Classmate.

Summary

The ERIC system strives to improve access and meet the needs of different constituencies through these and other access points described in the other digests in this set, and further efforts are promised for the future. Most significantly, a new component called ACCESS ERIC will be added to the ERIC system in 1989. Its purpose is to provide a central point for ERIC users to ask questions, obtain information, and recommend changes to the ERIC System. It is hoped that the access points noted above will be more consistently used and information will be disseminated more widely by the marketing and publicity efforts of this new entity.

This digest was prepared for the ERIC Clearinghouse on Information Resources by B. J. Vaughn, Acquisitions Director, and Michael Eisenberg, Associate Director. December 1988.

ERIC Publications and Online Access

Current Index to Journals in Education (CIJE)	Oryx Press 2214 North Central at Encanto Phoenix, AZ 85004-1483 1-800-457-ORYX	1989 Subscription monthly U.S.	$207.00
		elsewhere	250.00
		1989 Semi annual cumulations U.S.	198.00
		elsewhere	235.00
Resources in Education (RIE)	Superintendent of Documents U.S. Govt. Printing Office Washington, DC 20402 (202) 275-3054	Monthly subscription U.S.	66.00
		foreign	82.50
		Semi-annual index U.S.	20.00
ERIC Tapes	*ERIC Processing Facility** ORI, INC. 2440 Research Boulevard Rockville, MD 20850	*RIE 1966-present CIJE 1969-present.* Files may be purchased individually or as a collection. Please contact ERIC Facility for more information. Prices per tape start as low as	75.00

ERIC Publications and Online Access (continued)

ERIC Tools	ERIC Processing Facility ORI, Inc., Suite 550 2440 Research Boulevard Rockville, MD 20850 (301) 590-1420	*RIE Title Index, Identifier Authority, Source Directory, ERIC Processing Manual, Cross-Reference* lists. Documents are available individually and on annual subscription. Please contact ERIC Facility for more information and prices.	
ERIC Microfiche	ERIC Document Reproduction Service (EDRS) 3900 Wheeler Ave. Alexandria, VA 22304-6409. 1-800-227-ERIC	Annual subscription to RIE microfiche, approximately	$1,400.00
		ERIC Starter Kit: Combination of microfiche indexes, printed listings, hardware and support services. Cumulative Indexes to RIE, 1966–present. Cumulative document resumes from RIE, 1966–present. *Directory of ERIC Information Service Providers.*	
		Microfiche reader support service	440.00
		Annual update service	101.00
BRS Information Technologies	BRS Search Service 1200 Route 7 Latham, NY 12110 1-800-345-4BRS	Annual fee for password	75.00
		ERIC connect hour	25.00
		Online type full record per citation	.15
		Offline print per citation	.10
• BRS After Dark	BRS Search Service	Available EST 6pm-4am M-F 6am-2am Sat., 9am-4am Sun. 105 databases including ERIC	
		Connect hour	8.00
		Online type full record per citation	.03
		No offline print available	
Dialog	Dialog Information Service 3460 Hillview Ave. Palo Alto, CA 94304 1-800-3-DIALOG	Annual maintenance fee	25.00
		ERIC connect hour	30.00
		Online type full record per citation	.10
		Offline print per citation	.04
• Classmate Service	Dialog Information Service	Part of Classroom Instruction Program	
		ERIC connect hour	15.00
		Online type full record per citation	.10
		No offline print available; available to educators for students only, all day	
• Knowledge Index	Dialog Information Service	Available EST 6 pm-5 am M-Th, 6 pm-midnight Friday. Designed for end-users. 65 databases.	
Orbit Search Service	Pergamon Orbit Infoline 8000 West Park Dr. McLean, VA 22102 1-800-45ORBIT	Annual fee for one password	35.00
		ERIC connect hour	35.00
		Online type per citation	.10
		Offline print per citation	.14
Einstein	Addison Wesley Information Services 2725 Sand Hill Road Menlo Park, CA 94205 1-800-227-1936	90 popular databases used to teach online search to high school students. Sold directly to state/district schools and administrators.	
		Per search charge plus	3.25
		telecomm. charge per minute	.12
		Fixed price per search	4.50
		Telecomm. charge included Available on Compuserve	

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ERIC DIGEST

September 1989

EDO-IR-89-6

TRENDS IN EDUCATIONAL TECHNOLOGY: 1989

This digest is based on **Trends and Issues in Educational Technology 1988**, by Donald P. Ely.

In order to identify and document the pervasive trends in the field of educational technology, an elaborate content review of the professional literature was performed. Literature examined included journals, conference proceedings, ERIC RIE documents, annuals and yearbooks, and dissertations. The purpose of this digest is to highlight the significant trends observed in this content review process.

Design, development, and evaluation of instructional materials and procedures is a primary concern among practitioners in the field of educational technology.

A large portion of the educational technology literature is about the design, development, and evaluation of instructional materials. ***Issues*** in design include the application of cognitive psychology, such as in helping learners to conceptualize unfamiliar content; semiotics and the effects of message configuration characteristics, such as text design, text density, visual design, and use of symbol systems; and the effects of media use on motivation, including learner interest, achievement, and attitude development. ***Development*** includes such activities as needs assessment, course development, and product development. Finally, ***evaluation*** is concerned with measures and procedures for determining program effectiveness. Related to this is a call for better procedures for evaluating computer-assisted instruction software and software evaluation databases that are accessible to individuals.

Professional education for teachers in the use of educational technology principles and practices is seen as a basic need for present and future professional service.

Literature in this area is directed both at professional specialists within the field of educational technology and at individuals who teach. Currently, the emphasis appears to be on the teacher/instructor. The basic question is, "What competencies do teachers/instructors need to use technology effectively with their learners?" The assumption is that all classroom presenters should be using media and technology but are not, or that they are using it in less than optimal ways. Much of the literature discusses the use of computers and microcomputers by classroom teachers, and it emphasizes the need for teacher training in the area of ***information technology*** rather than educational technology or library instruction. This subtle difference is indicative of the gradual blending of educational media and technology with library and information science in the elementary and secondary schools.

Distance education is becoming a significant instructional delivery system that uses technological means to reach its goals.

Interest in distance education is stimulated in part by concerns over equity of access in the face of shortages of qualified elementary and secondary school teachers. Distance learning protocols have developed in direct response to real teaching/learning problems. Distance education offers practicable solutions to shortages of resources and teaching personnel. To prepare material for delivery requires a systematic approach to instructional design and a concern for the individual student rather than for group teaching. Much of the literature about distance education refers to the use of various telecommunications systems to provide optimum participation by the learners (National Governors' Association, 1988).

The computer is the dominant medium in the field of educational technology.

Statistics show tremendous growth in school use of computers in recent years (Quality Education Data, 1988). It is no longer just the computer-established secondary schools that lead the field; now more than half of U.S. elementary schools have enough computers to provide at least one for every two classrooms. Elementary schools use their micros primarily to supplement lessons with basic skills exercises and opportunities for drill and practice. In secondary schools, the micros are used primarily for teaching formal computer literacy (Talmis, 1988). Teachers express interest in having publishers develop software that teaches problem-solving skills and higher order thinking skills. While the literature reflects the growing enthusiasm for school computer use, it also shows continuing criticism of software quality.

After computers, telecommunications and video are emerging as major media delivery systems.

The apparent preoccupation of educators with computers often overshadows the increasing interest in telecommunications and video. While schools continue to use the traditional audiovisual equipment such as films, filmstrips, slides, audiotape recordings, and overhead transparencies in a more-or-less routine fashion, new development seems to be with video in the classroom for large group instruction, and telecommunications for individuals and small groups within the school and in distance education programs. The Quality Education Data study (1988) notes that over 90% of the schools in the U.S. are using videocassette recorders, while in 1983 only 30% of the schools used VCRs.

The role of the educational technologist is unclear and varies from location to location.

There are very few professionals who actually hold the title of "educational technologist." They are usually represented by such titles as: media specialist, media coordinator, or library media specialist; sometimes they are the director, supervisor, or coordinator of educational media, instructional media, or communications. Newer and more specific titles are emerging, including microcomputer coordinator, instructional computer teacher, or specialist in educational computing. Although it is now likely that most large schools and school districts have one or more persons who are responsible for the administrative, logistic, and instructional aspects of instructional media (or, in some cases, just computers), these professionals are assuming such roles from a variety of previous positions and with varying types of education and experience. The question that seems to underlie all of the ambiguity is, "What competencies are required of individuals who are designated to be the educational technologists?"

Case studies serve as models to follow in the implementation of educational technology applications.

People who study the adoption of educational innovations know that one of the most powerful factors affecting adoption is evidence that an innovation has worked in a situation similar to the one where it is being considered. Although they do not carry much information in the way of theory, research, or development, case studies serve as "lighthouses" or "pilots" for other institutions or organizations. The value of case studies in the organization and management of educational technology is demonstrated in the Office of Technology Assessment report, *Power On!* (1988). Spread throughout this document are 29 comprehensive case studies of technology use in schools. Such reports as *New York State Teacher Resource Centers and Electronic Networking*, *Writing by Hand/Writing with a Wordprocessor*, and *Software Evaluation in California* help educational practitioners see how others have successfully used technology to solve specific problems of teaching and learning.

The field of educational technology is concerned about its status as a profession.

Much of the journal literature is about educational technology as a profession, discussing such issues as status, ethics, legal aspects, history, and future developments of the field. It is obvious that practitioners of educational technology are concerned about their professional development and identity. They are attempting to understand who they are, what they should be doing, and how others view them. Such concerns are typical among individuals who feel that they are in an emerging profession without the tradition of an established discipline. It is a generally healthy trend which will probably be evident for many years to come.

Educational technology principles, products, and practices are just beginning to be integrated into courses and curricula.

The history of media in education is one of enrichment or enhancement. Not surprisingly, some of the literature examines the ways in which educational technology and media specialists provide support to teachers/instructors to improve their effectiveness. There is, however, increasing interest in media specialists as curriculum consultants. Komoski (1987) argues that schools must take the initiative and begin designing curricula that will provide teachers and students with a variety of options and strategies for achieving curriculum goals. To this end, he describes the Integrated Instructional Information Resource, a group of broadly accessible, electronically searchable, and interrelatable databases that are designed to assist educators in developing "opened-out" curricula. *Information Power* (AASL & AECT, 1988) states that the library media specialist must develop a new, multi-faceted role as information specialist, teacher, and instructional consultant, and it offers guidance for assuming these roles.

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DIGEST

September 1989

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TRENDS IN LIBRARY AND INFORMATION SCIENCE: 1989

This digest is based on **Trends and Issues in Library and Information Science**, by Michael B. Eisenberg, Carolyn K. Trombly, and Lindsay D. Ruth.

In order to identify and document the pervasive trends in the field of library and information science, an elaborate content review of the professional literature was performed. Literature examined included journals, conference proceedings, ERIC *RIE* documents, annuals and yearbooks, and dissertations. The purpose of this digest is to highlight the significant trends observed in this content review process.

Trends in the Library and Information Professions

There are important emerging roles and responsibilities for information professionals.

Two themes related to the expanding roles of information professionals are (a) the need for librarians to take a proactive approach to some of their traditional activities, and (b) the possibilities for information professionals to take on new roles, which are often stimulated by emerging information technologies. Librarians are encouraged to reinterpret "traditional" library skills, to explore new ways of putting those skills to work, and to promote themselves to administration. Models for "electronic libraries" show librarians taking responsibility for the provision and management of information that comes not from traditional collections, but from databases.

The status and image of librarians remains a major concern across the library professions.

In spite of emerging new roles, all types of librarians are still concerned with image. Aspects of this include librarians' image of themselves, their image in society, and their image among users. There is continuing concern about the status of librarians in relation to that of information managers, information scientists, and other professionals under the "information" umbrella. Within such a varied profession, establishing a unified identity is a major concern, as is creating a positive image that accurately reflects the skills and responsibilities of library and information professionals.

Professional education programs are being challenged to balance the need to provide training in specific areas while also developing comprehensive, coordinated programs covering all areas of information science.

Questions facing professional education in library and information science include: What is information science? How can seasoned practitioners maintain currency and extend their competencies? What prerequisites should exist for those entering the field? What do prospective employers expect from graduates of various programs? What should schools teach to prepare their graduates for productive employment, both now and in the future? (Cooper & Lunin, 1988). Educators must meet specific job market needs, but they also feel a responsibility to provide students with an introduction to a broad information world. Changes in library and information science programs reflect attempts to achieve both goals.

Libraries of all types are incorporating planning processes into their management activities.

The library field as a whole shows a strong interest in planning. Numerous conference workshops and articles in the literature address planning. This includes planning for specific services as well as plannning for long range organizational development (strategic planning). A strategic plan provides a foundation for making choices about future library directions (McClure, Owen, Zweizig, Lynch, & Van House, 1987). Repeated themes in the literature include the need to plan for change, to anticipate future needs and restrictions, and to take a proactive stance toward environmental factors.

Information Power, ***the new guidelines for school library media programs, is already having a major impact on the field.***

The major development in 1988 in terms of standards was the publication of the new school library media guidelines, *Information Power* (AASL & AECT, 1988). This document presents an active, forward-looking role for library media programs based on the library media specialist functioning as information specialist, teacher, and instructional consultant. Discussions of the guidelines are just beginning to appear in the literature; however, the document has already been presented to educators at all levels.

Trends in Information Technology

Technology has an impact on the presentation of information and related information services.

Technology influences change in the structure and format of information resources. Traditional formats for government publications, library catalogs, thesauri, microforms, bibliographic sources, and even monographs are being challenged by computer-based alternatives. Computer-based information resources are still in a state of infancy. Attention is just beginning to be placed on full-text information sources, computer databases that combine multi-media formats, and computer-based hypermedia information stores that combine text, sound, graphics, and moving pictures and are interconnected through multiple points of access for a great degree of user interaction. There is also increased reliance on automated systems for library services and operations such as acquisitions, networking and interlibrary loan, serials control, catalogs, and reference services.

Advances in technology result in major, highly visible changes in library and information work.

As CD-ROM and other hardware and software systems appear and are applied in various environments (from schools to corporations), the focus in the literature goes beyond the technologies themselves to a consideration of the impact of various technologies. Every type of library and information setting is affected by technology. Discussions in the literature address the need to reinvent the library in the information age, scholars' management of information, the impact of technology on scholarship, and the implemention of technological change. A major issue in higher education is the relationship between the library and the computer center in providing information services on campus. Another is the impact of technology on curriculum and resource management in colleges. In other settings (archives, school library media centers, public libraries, and information services in business and government), services and management are similarly influenced by technological change.

New research efforts in information systems include (a) integrating various formats and structures in a single system, (b) developing sophisticated user interfaces, and (c) the application of artificial intelligence to information systems.

In an opinion paper, Sparck Jones (1988) identified these three trends in information management and systems development. Integrated formats and structures refers to systems that include a variety of media (text, pictures, graphics) and document types (reports, papers, tables, charts, letters, user comments). Developments in user interfaces include increased workstation capabilities, multitasking, linked operations, flexibility and convenience, multiple windows, pull-down menus, and hypermedia. Artificial intelligence applications are going beyond the interpretation of natural language queries or text, to systems that expertly interpret information from a context of broad knowledge bases in fundamental areas.

CD-ROM has emerged as a major technology for providing access to a range of information systems, such as bibliographic retrieval systems, databases, library catalogs, and full-text systems.

Optical disk technology in the form of CD-ROM is clearly the technology of the present. The literature is filled with discussions of new CD-ROM products, the application of CD-ROM in new situations, and research and development to expand CD-ROM capabilities (Lunin & Schipma, 1988). Current CD-ROM products include bibliographic databases, online catalogs, and full-text reference sources. Research and development efforts involve interchangeable architectures, multi-user access through networking and other means, and transparent access across software systems. CD-ROM is viable and being applied in all types of libraries, in business and government situations, and across subject areas.

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ERIC DIGEST

December 1988

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ACCESSING ERIC WITH YOUR MICROCOMPUTER: Update.

by Jane Klausmeier Janis

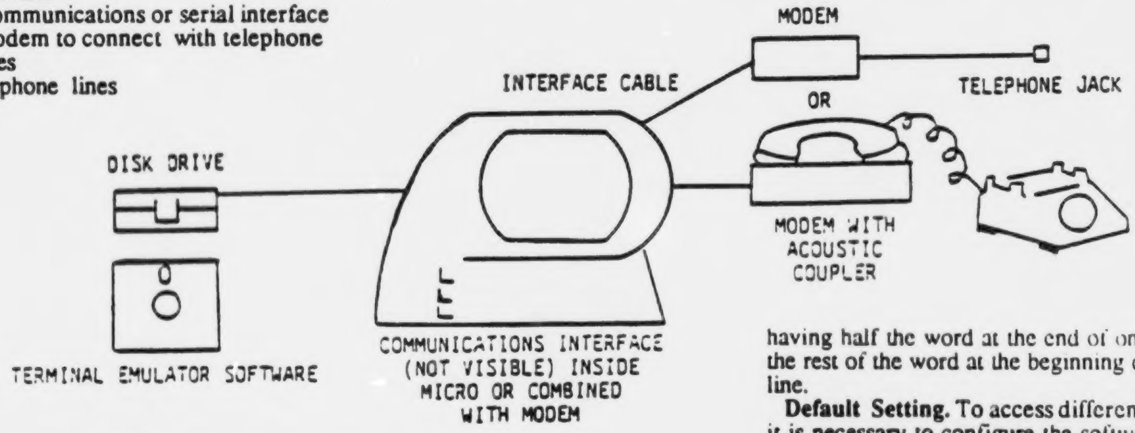
This digest describes how to use your microcomputer as a terminal. It covers:

- Hardware and software requirements;
- Configuring the software; and
- Basic requirements for specific microcomputers

What is needed to make a microcomputer act as a terminal?

Any microcomputer can be used as a terminal when the following requirements are met:

- Software—communications or terminal emulator software
- Hardware
  - —communications or serial interface
  - —modem to connect with telephone lines
- Telephone lines


MODEM
INTERFACE CABLE
TELEPHONE JACK
OR
DISK DRIVE
MODEM WITH ACOUSTIC COUPLER
TERMINAL EMULATOR SOFTWARE
COMMUNICATIONS INTERFACE (NOT VISIBLE) INSIDE MICRO OR COMBINED WITH MODEM

Software—Communications or Terminal Emulator Software

A computer needs certain instructions to make it act as a terminal to communicate with another computer. It is possible to make your microcomputer act as a dumb terminal using only a modem and the communications interface in most situations, but for database searching other features are desirable. The need for these special features depends on individual requirements. For example, unless you have some way of storing a search to disk or to a printer, you won't be able to reference the search later. Software differs for every computer and operating system. It is important that you experiment with the software on a system like your own or have some kind of return policy before purchasing.

Some special features in communications software that should be considered are listed below. These features are desirable for using your microcomputer as a terminal to do database searching. If you have other uses for a terminal (e.g., accessing a large mainframe computer), other features will be needed as well.

Print. This feature allows the screen display to be printed. Some software allows you to print simultaneously, while in other cases it is necessary to save to disk and load the disk's contents to the printer later.

Save. This feature lets you save the screen display on a disk.

Access to Command Mode. It is desirable to be able to turn the printer on and off, change duplex settings, and access other system commands without breaking the connection with the vendor.

Format Display. Material being displayed on the screen will be formatted so that complete words will appear instead of having half the word at the end of one line and the rest of the word at the beginning of the next line.

Default Setting. To access different vendors, it is necessary to configure the software for the vendor. It is very useful to be able to pre-designate the configuration and then refer to that default setting (see *Configuring the Software*).

Status Indicator. Each software package provides certain options, e.g., printer on or off, write to disk, etc. It is helpful to be able to go to a menu that indicates the status of these options at any stage.

A communications software package called Smartcom can be purchased with Hayes modems, while Racal Vadic provides the software with the modem. There are also two public domain communications programs for the IBM PC and compatibles called Q-Modem and PC Talk. They are available through microcomputer clubs or bulletin boards.

Configuring the Software

In order for a microcomputer to interface (access) the major vendors (BRS, DIALOG, or SDC), certain technical requirements, sometimes called telecommunications protocols, need to be set. This is called configuring the microcomputer and is part of the software. Baud rate, parity, duplex, and data length are examples of the settings that need to be made. The configuration settings vary for each vendor. Documentation from the vendors should include the necessary information, or they can be contacted directly.

• DIALOG:	1-800-3-DIALOG
• BRS:	1-800-345-4277
• SDC:	1-800-421-7229 or 1-800-352-6689 (CA)

Depending on the kind of microcomputer you use as a terminal, which vendor you access, and which telephone network you use—Tymnet, Telenet, or Uninet—certain commands need to be added to the protocol. For example, if you are using a printer during your search, certain commands are necessary to slow down transmission so that no data is lost. The vendors can give you this information.

Hardware

In order for data to be sent over a distance via the telephone lines, it is first necessary to convert from parallel transmission (i.e., sending 8 bits of data simultaneously) to serial transmission, which sends each bit one after the other or consecutively. This is accomplished by an EIA (Electronic Industries Association) RS-232C interface, the communications interface. Each computer manufacturer has a different way of referring to this interface (see the list below). It can be called a communications card, an interface module, an RS-232C interface or port, serial interface, or any combination of these. The RS-232C interface can also be combined with the other essential element in using your computer as a terminal, the modem.

Modem is an acronym for MOdulator/DEModulator. Because it would be very expensive and inefficient to run direct lines from individual terminals to the large vendors, telephone lines are used to transmit the signals. To do this, serial transmissions need to be converted (or modulated) from digital to audio signals. At the other end, the audio signals have to be demodulated back into digital serial mode.

The speed at which data is being sent and received has to be the same. This speed needs to be designated in the communications protocol. Most vendors support the range of possible modem speeds from 300 to 9600 baud. Because the user is being charged for the amount of time spent online with the vendor, it is advantageous to use as high a baud rate as possible (1200 up to 9600). Though it is true that the faster the baud rate the more expensive the modem, prices for the faster modems continue to decline.

Lines from the RS-232C interface are connected to the modem, which is then hooked into the telephone line. This is done with either a modular jack or an acoustic coupler. A modular jack is the plug used to connect a regular telephone. If the plugs are compatible, the regular phone can be unplugged and the modem connected. An acoustic coupler is a modem that uses the handset on a telephone to connect with the phone lines. The modem has two cups that hold the receiver (handset) to allow transmission of audio signals. Usually a cable with adapters is needed to make the connection between the RS-232C interface and the modem.

The communications interface and modem can also be combined on a single board that fits into a slot inside the micro and connects directly with the telephone. This is called an internal modem.

Some of the popular microcomputers and the components necessary to access the vendors are listed below.

Microcomputers and Necessary Hardware / Software

APPLE II, II PLUS, IIe
Telephone modem (Hayes Micromodem II suggested)
Communications card (Serial or Superserial)
Software available with Hayes modems

APPLE IIc
Apple Personal Modem or Hayes External Modem
Built-in RS-232 port
Apple Access

MACINTOSH
Apple Personal Modem or Hayes External Modem
Built-in RS-232 port
For Macintosh-MacTerminal software

COMPAQ
RS-232 interface
Hayes or Hayes compatible modem
Public domain software or software available with modem

IBM PERSONAL COMPUTER
Modem—Hayes Smartmodem, IBM Hayes compatible modem, or Racal Vadic
RS-232 interface (serial port built in on most models)
Public domain software, e.g., PC TALK, ProComm
Software available with modem

LEADING EDGE
Built-in RS-232 interface
Hayes or Hayes compatible modem
Public domain software or software available with modem

TEXAS INSTRUMENTS 99/4, 99/4A
Modem
RS-232 interface
Terminal EMULATOR II software cartridge

TRS-80
Modem
RS-232 interface board
RS Term software

Most CP/M-based microcomputers
Modem
RS-232 port
Communications software

This digest was prepared by Jane Klausmeier Janis, Operations Manager of the ERIC Clearinghouse on Information Resources. December 1988.

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Fact Sheet

PRODUCT SUMMARY: ERIC ON CD-ROM

The ERIC database is produced and sold on CD-ROM by three commercial vendors. Following is a summary of prices and hardware requirements for each product. Features, hardware requirements, and prices change frequently; when considering the purchase of a CD-ROM database, call or write each vendor for the latest information.

NOTE: These CD-ROM products are offered for subscription, not sale. Vendors require the signing of a license agreement and may also ask that superceded disks be returned or destroyed. Unless otherwise noted, the price given is for an annual subscription. This price typically includes search software, future software upgrades, and standard documentation.

Product: DIALOG OnDisc ERIC

Producer:
DIALOG Information Services, Inc.
3460 Hillview Ave.
Palo Alto, CA 94304
800-334-2564; 415-858-2700

Hardware:
- IBM PC, XT, AT, or PS/2 (or 100% compatible) running PC DOS or MS DOS Version 3.1 or higher
- 512K RAM minimum; 640K RAM recommended
- CD-ROM drive with Microsoft Extensions, version 2.0 or higher
- Hayes-compatible modem, if searches will be transferred online

Price:

• Current File (1980 to present, 1 disk, quarterly updates)	$950
• Complete file (1966 to present, 2 disks, quarterly updates to current disk)	$1650 1st year, $950 renewal

Product: OCLC Search CD450 ERIC

Producer:
OCLC Online Computer Library Center, Inc.
6565 Frantz Road
Dublin, OH 43017-0702
800-848-5878, ext. 5040; 614-764-6000

Hardware:
- IBM PC XT, AT, or PS/2 (or 100% compatible)
- 640K RAM with 20 Mb hard disk or hard card
  (An OCLC M300XT or M310 Workstation can be used in place of the personal computer)
- CD-ROM drive with MS DOS Extensions 2.0 or higher

Price:

• Current file (1982 to present, 1 disk, quarterly updates)	$425, $350 for OCLC members
• Retrospective file (2 disks, 1966-1981, one-time fee)	$900, $750 for OCLC members

Product: **ERIC on SilverPlatter**

Producer:
SilverPlatter Information, Inc.
37 Walnut Street
Wellesley Hills, MA 02181
617-239-0306

Hardware:

- IBM PC, XT, AT, PS/2 (or 100% compatible) running PC DOS or MS DOS Version 2.1 or higher
- 512K RAM minimum; 640K RAM with hard disk recommended
- CD-ROM drive (contact SilverPlatter for acceptable models; MS DOS Extensions may be required)

OR

- Macintosh Plus, Macintosh SE series, or Macintosh II series running Macintosh System 6.0.2 or higher
- Two 800K floppy drives and 1Mb memory minimum; hard disk and 2Mb memory recommended
- Apple CD SC CD-ROM drive

Price:

• Current file with quarterly updates (1983 to present, 1 disk)	$650
• Current file with annual update only (1983 to present, 1 disk)	$390
• Complete file (1966 to present, 3 disks, quarterly updates to current disk)	$1200 1st year, $650 renewal
• Retrospective file (2 disks, 1966-1982, one-time fee)	$900

QUESTIONS TO ASK

Administration

Is the product appropriate for your clientele?
Are the time span covered and the frequency of updates sufficient?
Are there print/online counterparts? At what cost?
Does the anticipated volume of use justify the cost of a CD-ROM subscription?
Is the product compatible with equipment you own or intend to acquire?

Vendor

Does the vendor produce any other CD-ROM databases to which you might like to subscribe?
Are the product licensing terms acceptable to you?
Is documentation sufficient?
Is telephone support available?

Searching

How many access points are available?
Can the search strategy be saved and reexecuted in the future or on another disk from the set?
Can search results be sorted? Downloaded? Displayed in a variety of formats?
Is there an on-disk thesaurus? Does it show broader terms, narrower terms, related terms, and postings?
Is on-screen help available?
Does the system offer shortcuts for experienced searchers?
Is direct record access possible?

* * * * * * * * * * *

Prepared by Nancy R. Preston, User Services Coordinator
ERIC Clearinghouse on Information Resources
February, 1990

Appendix B

Documents Through the OCLC Interlibrary Loan Subsystem

PAPER COPY (PC)

PRICE CODE	PAGINATION	PRICE
PC 01	1- 25	$2.03
PC 02	26- 50	4.06
PC 03	51- 75	6.09
PC 04	76-100	8.12
PC 05	101-125	10.15
PC 06	126-150	12.18
PC 07	151-175	14.21
PC 08	176-200	16.24
PC 09	201-225	18.27
PC 10	226-250	20.30
PC 11	251-275	22.33
PC 12	276-300	24.36
PC 13	301-325	26.39
PC 14	326-350	28.42
PC 15	351-375	30.45
PC 16	376-400	32.48
PC 17	401-425	34.51
PC 18	426-450	36.54
PC 19	451-475	38.57
PC 20	476-500	40.60
PC 21	501-525	42.63
PC 22	526-550	44.66
PC 23	551-575	46.69
PC 24	576-600	48.72
PC 25	601-625	50.75
PC 26	626-650	52.78
PC 27	651-675	54.81
PC 28	676-700	56.84
PC 29	701-725	58.87
PC 30	726-750	60.90
PC 32	776-800	64.96
PC 33	801-825	66.99
PC 34	826-850	69.02
PC 35	851-875	71.05
PC 36	876-900	73.08
PC 37	901-925	75.11
PC 38	926-950	77.14
PC 39	951-975	79.17
PC 40	976-1,000	81.20

ADD $2.03 FOR EACH ADDITIONAL 25 PAGES, OR FRACTION THEREOF

MICROFICHE (MF)

PRICE CODE	PAGINATION	NO. OF FICHE	PRICE
MF 01	1- 480	1-5	$.86
MF 02	481- 576	6	1.03
MF 03	577- 672	7	1.20
MF 04	673- 768	8	1.37
MF 05	769- 864	9	1.54
MF 06	865- 960	10	1.71
MF 07	961-1,056	11	1.88
MF 08	1,057-1,152	12	2.05
MF 09	1,153-1,248	13	2.22
MF 10	1,249-1,344	14	2.39
MF 11	1,345-1,440	15	2.56
MF 12	1,441-1,536	16	2.73
MF 13	1,537-1,632	17	2.90
MF 14	1,633-1,728	18	3.07
MF 15	1,729-1,824	19	3.24

ADD $0.17 FOR EACH ADDITIONAL MICROFICHE

Ordering ERIC® Documents Through the OCLC Interlibrary Loan (ILL) Subsystem

EDRS

The ERIC Document Reproduction Service

OCLC Members

A fast and easy way to obtain ERIC documents is now available through the OCLC Interlibrary Loan (ILL) Subsystem.

The Educational Resources Information Center (ERIC) is the world's largest education database. The ERIC monthly journal, *Resources in Education* (RIE), announces technical and research reports, conference papers, government documents, and other documentary materials acquired by the ERIC system.

Most of the documents announced in RIE are available on microfiche and paper copy from the ERIC Document Reproduction Service.

It is easy to order documents from EDRS, the ERIC Document Reproduction Service, via the OCLC Interlibrary Loan Subsystem.

To Order ERIC Documents

Simply follow these instructions for completing the ILL workform:

LENDER: EDR, EDR

CALLNO: Leave blank

AUTHOR: Enter if known

TITLE: Enter title of document (system-supplied if using a record in the OCLC Online Union Catalog)

IMPRINT: Enter EDRS and document date

ARTICLE: Enter ERIC document number as cited in RIE (include ED prefix)

VERIFIED: Enter RIE page number or OCLC if page unknown

PATRON: Enter your name or organization

SHIP TO: Enter address

BILL TO: Enter "same" if the BILL TO is the same as the SHIP TO or another name and address if different.

SHIP VIA: If shipment by other than 1st class mail or UPS is desired, state method, i.e., Federal Express, UPS Next Day Air or USPS Express Mail

MAXCOST: See price list and enter price code (i.e., PCO1)

BORROWING NOTES: 1) Enter number of copies. Cite MF (microfiche) or PC (paper copy) for desired format. 2) Enter method of payment, i.e., MasterCard or Visa and expiration date; charges to a deposit account must include account number. If no payment method entered, EDRS will invoice you. 3) Foreign orders except Canada, must be prepaid by check drawn on a bank payable in US funds. 4) If no bibliographic record exists for the desired item, you can order by filling out a blank workform. Type wf/EDR, EDR from any display other than a bibliographic record or its related locations or union list displays (for more information see the *Interlibrary Loan: User Manual*, p. 2:15).

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Prepayment on foreign orders, except Canadian orders and those charged to a MasterCard or VISA Account is required. Payment must be in U.S. funds payable on a U.S. bank.

Deposit accounts are preferred and facilitate order processing.

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3900 WHEELER AVE., ALEXANDRIA, VA 22304-6409

For more information
Call Toll Free 1-800-227-ERIC (3742)
In Virginia Call (703) 823-0500

Appendix C

ERIC Ready References

ERIC **Ready Reference #1**
Revised January 1990

ERIC Accession Number Ranges
(By Year)

Resources in Education (RIE)

PRE-1966	ED	001 001 — 003 960
1966	ED	010 000 — 010 093
1967	ED	010 094 — 012 348
1968	ED	012 349 — 021 151
1969	ED	021 152 — 031 604
1970	ED	031 605 — 042 060
1971	ED	042 061 — 054 390
1972	ED	054 391 — 066 620
1973	ED	066 621 — 080 787
1974	ED	080 788 — 095 253
1975	ED	095 254 — 110 594
1976	ED	110 595 — 127 413
1977	ED	127 414 — 142 684
1978	ED	142 685 — 157 987
1979	ED	157 988 — 174 743
1980	ED	174 744 — 190 736
1981	ED	190 737 — 205 670
1982	ED	205 671 — 219 495
1983	ED	219 496 — 233 122
1984	ED	233 123 — 247 369
1985	ED	247 370 — 260 172
1986	ED	260 173 — 272 646
1987	ED	272 647 — 284 955
1988	ED	284 956 — 297 084
1989	ED	297 085 — 309 233

Current Index to Journals in Education (CIJE)

1969	EJ	000 001 — 011 707
1970	EJ	011 708 — 027 599
1971	EJ	027 600 — 045 271
1972	EJ	045 272 — 062 751
1973	EJ	062 752 — 082 164
1974	EJ	082 165 — 101 872
1975	EJ	101 873 — 121 926
1976	EJ	121 927 — 142 252
1977	EJ	142 253 — 163 351
1978	EJ	163 352 — 186 217
1979	EJ	186 218 — 207 484
1980	EJ	207 485 — 229 235
1981	EJ	229 236 — 250 663
1982	EJ	250 664 — 267 876
1983	EJ	267 877 — 286 200
1984	EJ	286 201 — 305 036
1985	EJ	305 037 — 323 036
1986	EJ	323 037 — 340 802
1987	EJ	340 803 — 358 804
1988	EJ	358 805 — 375 771
1989	EJ	375 772 — 394 599

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ERIC® Ready Reference #2
Revised May 1989

ERIC Publication Types

Code	Publication Type
010	BOOKS
	COLLECTED WORKS
020	— General
021	— Conference Proceedings
022	— Serials
030	CREATIVE WORKS (Literature, Drama, Fine Arts)
	DISSERTATIONS/THESES
040	— Undetermined
041	— Doctoral Dissertations
042	— Masters Theses
043	— Practicum Papers
	GUIDES
050	— General (use more specific code, if possible)
	— Classroom Use
051	— Instructional Materials (For Learner)
052	— Teaching Guides (For Teacher)
055	— Non-Classroom Use (For Administrative & Support Staff, and for Teachers, Parents, Clergy, Researchers, Counselors, etc. in Non-Classroom Situations)
060	HISTORICAL MATERIALS
070	INFORMATION ANALYSES (State-of-the-Art Papers, Research Summaries, Reviews of the Literature on a Topic)
071	— ERIC Information Analysis Product (IAP's)
072	— Book/Product Reviews
073	— ERIC Digests (Selected) in Full Text
080	JOURNAL ARTICLES
090	LEGAL/LEGISLATIVE/REGULATORY MATERIALS
100	AUDIOVISUAL/NON-PRINT MATERIALS
101	— Computer Programs
102	— Machine-Readable Data Files (MRDF)
110	STATISTICAL DATA (Numerical, Quantitative, etc.)
120	VIEWPOINTS (Opinion Papers, Position Papers, Essays, etc.)
	REFERENCE MATERIALS
130	— General (use more specific code, if possible)
131	— Bibliographies/Annotated Bibliographies
132	— Directories/Catalogs
133	— Geographic Materials/Maps
134	— Vocabularies/Classifications/Dictionaries
	REPORTS
140	— General (use more specific code, if possible)
141	— Descriptive (i.e. Project Descriptions)
142	— Evaluative/Feasibility
143	— Research/Technical
150	SPEECHES, CONFERENCE PAPERS
160	TESTS, EVALUATION INSTRUMENTS
170	TRANSLATIONS
171	— Multilingual/Bilingual Materials

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ERIC **Ready Reference #3**
Revised May 1989

Sample Document Resume

ERIC Accession Number—identification number sequentially assigned to documents as they are processed

Author(s).

Title.

Organization where document originated.

Date Published.

Contract or Grant Number.

Alternate source for obtaining document.

Language of Document—documents written entirely in English are not designated, although "English" is carried in their computerized records.

Publication Type—broad categories indicating the form or organization of the document, as contrasted to its subject matter. The category name is followed by the category code

ERIC Document Reproduction Service (EDRS) Availability— "MF" means microfiche; "PC" means reproduced paper copy. When described as "Document Not Available from EDRS," alternate sources are cited above. Prices are subject to change; for latest price code schedule see section on "How to Order ERIC Documents," in the most recent issue of RIE.

ED 654 321 CE 123 456
Smith, John D. Johnson, Jane
Career Planning for Women.
Central Univ., Chicago, IL.
Spons Agency — Office of Educational Research and Improvement (ED), Washington, DC.
Report No. — CU-2081-S
Pub Date — May 89
Contract— NIE-C-83-0001
Note — 12p.; Paper presented at the National Conference on Career Education (3rd, Chicago, IL, May 15-17, 1989).
Available from—Campus Bookstore, 123 College Ave., Chicago, IL 60690 ($3.25).
Language—English, French
Pub Type—Speeches/Meeting Papers (150)
EDRS Price—MF01/PC06 Plus Postage.
Descriptors —Career Guidance, *Career Planning, Careers, *Demand Occupations, *Employed Women, *Employment Opportunities, Females, Labor Force, Labor Market, *Labor Needs, Occupational Aspiration, Occupations
Identifiers — Consortium of States, *National Occupational Competency Testing Institute

Women's opportunities for employment will be directly related to their level of skill and experience and also to the labor market demands through the remainder of the decade. The number of workers needed for all major occupational categories is expected to increase by about one-fifth between 1980 and 1990, but the growth rate will vary by occupational group. Professional and technical workers are expected to have the highest predicted rate (39 percent), followed by service workers (35 percent), clerical workers (26 percent), sales workers (24 percent), craft workers and supervisors (20 percent), managers and administrators (15 percent), and operatives (11 percent). This publication contains a brief discussion and employment information concerning occupations for professional and technical workers, managers and administrators, skilled trades, sales workers, clerical workers, and service workers. In order for women to take advantage of increased labor market demands, employer attitudes toward working women need to change and women must (1) receive better career planning and counseling, (2) change their career aspirations, and (3) fully utilize the sources of legal protection and assistance that are available to them. (SB)

Clearinghouse Accession Number.

Sponsoring Agency—agency responsible for initiating, funding, and managing the research project.

Report Number—assigned by originator

Descriptive Note (pagination first)

Descriptors—subject terms found in the Thesaurus of ERIC Descriptors that characterize substantive content. Only the major terms (preceded by an asterisk) are printed in the Subject Index.

Identifiers—additional identifying terms not found in the Thesaurus. Only the major terms (preceded by an asterisk) are printed in the Subject Index.

Informative Abstract.

Abstractor's Initials.

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PC 05	101 - 125	10.15
PC 06	126 - 150	12.18
PC 07	151 - 175	14.21
PC 08	176 - 200	16.24
PC 09	201 - 225	18.27
PC 10	226 - 250	20.30
PC 11	251 - 275	22.33
PC 12	276 - 300	24.36
PC 13	301 - 325	26.39
PC 14	326 - 350	28.42
PC 15	351 - 375	30.45
PC 16	376 - 400	32.48
PC 17	401 - 425	34.51
PC 18	426 - 450	36.54
PC 19	451 - 475	38.57
PC 20	476 - 500	40.60
PC 21	501 - 525	42.63
PC 22	526 - 550	44.66
PC 23	551 - 575	46.69
PC 24	576 - 600	48.72
PC 25	601 - 625	50.75
PC 26	626 - 650	52.78
PC 27	651 - 675	54.81
PC 28	676 - 700	56.84
PC 29	701 - 725	58.87
PC 30	726 - 750	60.90
PC 31	751 - 775	62.93
PC 32	776 - 800	64.96
PC 33	801 - 825	66.99
PC 34	826 - 850	69.02
PC 35	851 - 875	71.05
PC 36	876 - 900	73.08
PC 37	901 - 925	75.11
PC 38	926 - 950	77.14
PC 39	951 - 975	79.17
PC 40	976 - 1,000	81.20

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MICROFICHE

PRICE CODE	PAGINATION	NO OF FICHE	PRICE
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MF 03	577 - 672	7	1.20
MF 04	673 - 768	8	1.37
MF 05	769 - 864	9	1.54
MF 06	865 - 960	10	1.71
MF 07	961 - 1,056	11	1.88
MF 08	1,057 - 1,152	12	2.05
MF 09	1,153 - 1,248	13	2.22
MF 10	1,249 - 1,344	14	2.39
MF 11	1,345 - 1,440	15	2.56
MF 12	1,441 - 1,536	16	2.73
MF 13	1,537 - 1,632	17	2.90
MF 14	1,633 - 1,728	18	3.07
MF 15	1,729 - 1,824	19	3.24

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(1-96 PAGES)

Ready Reference # 6
Revised March 1990

ERIC CLEARINGHOUSES *(and Other Network Components)*

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The exact number of Clearinghouses has fluctuated over time in response to the shifting needs of the educational community. There are currently 16 Clearinghouses. These are listed below, together with full addresses, telephone numbers, and brief scope notes describing the areas they cover.

ERIC Clearinghouse on *Adult, Career, and Vocational Education* (CE)
Ohio State University
Center on Education and Training for Employment
1900 Kenny Road
Columbus, Ohio 43210-1090
Telephone: (614) 292-4353
(800) 848-4815 Fax: (614) 292-1260

All levels and settings of adult and continuing, career, and vocational/technical education. Adult education, from basic literacy training through professional skill upgrading. Career education, including career awareness, career decisionmaking, career development, career change, and experience-based education. Vocational and technical education, including new subprofessional fields, industrial arts, corrections education, employment and training programs, youth employment, work experience programs, education/business partnerships, entrepreneurship, adult retraining, and vocational rehabilitation for the handicapped.

ERIC Clearinghouse on *Counseling and Personnel Services* (CG)
University of Michigan
School of Education, Room 2108
610 East University Street
Ann Arbor, Michigan 48109-1259
Telephone: (313) 764-9492 Fax: (313) 747-2425

Preparation, practice, and supervision of counselors at all educational levels and in all settings; theoretical development of counseling and guidance; personnel procedures such as testing and interviewing and the analysis and dissemination of the resultant information; group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

ERIC Clearinghouse on *Educational Management* (EA)
University of Oregon
1787 Agate Street
Eugene, Oregon 97403-5207
Telephone: (503) 346-5043 Fax: (503) 346-5890

The leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators; tasks and processes of administration; methods and varieties of organization and organizational change; and the social context of educational organizations.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

ERIC Clearinghouse on *Elementary and Early Childhood Education* (PS)
University of Illinois
College of Education
805 W. Pennsylvania Avenue
Urbana, Illinois 61801-4897
Telephone: (217) 333-1386 Fax: (217) 333-5847

The physical, cognitive, social, educational, and cultural development of children from birth through early adolescence; prenatal factors; parental behavior factors; learning theory research and practice related to the development of young children, including the preparation of teachers for this educational level; educational programs and community services for children; and theoretical and philosophical issues pertaining to children's development and education.

ERIC Clearinghouse on *Handicapped and Gifted Children* (EC)
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091-1589
Telephone: (703) 620-3660 Fax: (703) 264-9494

All aspects of the education and development of the handicapped and gifted, including prevention, identification and assessment, intervention, and enrichment, both in special settings and within the mainstream.

ERIC Clearinghouse on *Higher Education* (HE)
George Washington University
One Dupont Circle, N.W., Suite 630
Washington, D.C. 20036-1183
Telephone: (202) 296-2597 Fax: (202) 296-8379

Topics relating to college and university conditions, problems, programs, and students. Curricular and instructional programs, and institutional research at the college or university level. Federal programs, professional education (medicine, law, etc.), professional continuing education, collegiate computer-assisted learning and management, graduate education, university extension programs, teaching-learning, legal issues and legislation, planning, governance, finance, evaluation, interinstitutional arrangements, management of institutions of higher education, and business or industry educational programs leading to a degree.

ERIC Clearinghouse on *Information Resources* (IR)
Syracuse University
Huntington Hall, Room 030
150 Marshall Street
Syracuse, New York 13244-2340
Telephone: (315) 443-3640 Fax: (315) 443-5732

Educational technology and library and information science at all levels. Instructional design, development, and evaluation are the emphases within educational technology, along with the media of educational communication: computers and microcomputers, telecommunications (cable, broadcast, satellite), audio and video recordings, film and other audiovisual materials, as they pertain to teaching and learning. Within library and information science the focus is on the operation and management of information services for education-related organizations. All aspects of information technology related to education are considered within the scope.

ERIC Clearinghouse for *Junior Colleges* (JC)
University of California at Los Angeles (UCLA)
Math-Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024-1564
Telephone: (213) 825-3931 Fax: (213) 206-8095

Development, administration and evaluation of two-year public and private community and junior colleges, technical institutes, and two-year branch university campuses. Two-year college students, faculty, staff, curricula, programs, support services, libraries, and community services. Linkages between two-year colleges and business/industrial organizations. Articulation of two-year colleges with secondary and four-year postsecondary institutions.

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ERIC Clearinghouse on *Languages and Linguistics* (FL)
Center for Applied Linguistics
1118 22nd Street, N.W.
Washington, D.C. 20037-0037
Telephone: (202) 429-9551 Fax: (202) 429-9766

Languages and language sciences; theoretical and applied linguistics; all areas of foreign language, second language, and linguistics instruction, pedagogy, or methodology; psycholinguistics and the psychology of language learning; cultural and intercultural context of languages; application of linguistics in language teaching; bilingualism and bilingual education; sociolinguistics; study abroad and international exchanges; teacher training and qualifications specific to the teaching of foreign languages and second languages; commonly and uncommonly taught languages, including English as a second language; related curriculum developments and problems

ERIC Clearinghouse on *Reading and Communication Skills* (CS)
Indiana University, Smith Research Center
2805 East 10th Street, Suite 150
Bloomington, Indiana 47405-2373
Telephone: (812) 855-5847 Fax: (812) 855-7901

Reading, English, and communication skills (verbal and nonverbal), preschool through college; educational research and instruction development in reading, writing, speaking, and listening; identification, diagnosis, and remediation of reading problems; speech communication (including forensics), mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching; instructional materials, curricula, tests/measurement, and methodology at all levels of reading; the role of libraries and other agencies in fostering and guiding reading; diagnostics and remedial reading services in schools and clinical settings. Preparation of reading teachers and specialists.

ERIC Clearinghouse on *Rural Education and Small Schools* (RC)
Appalachia Educational Laboratory
1031 Quarrier Street
P.O. Box 1348
Charleston, West Virginia 25325-1348
Telephone: (800) 624-9120 (Outside WV)
(800) 344-6646 (In WV) Fax: (304) 347-0487

Economic, cultural, social, or other factors related to educational programs and practices for rural residents; American Indians/Alaska Natives, Mexican Americans, and migrants; educational practices and programs in all small schools; outdoor education.

ERIC Clearinghouse for *Science, Mathematics, and Environmental Education* (SE)
Ohio State University
1200 Chambers Road, Room 310
Columbus, Ohio 43212-1792
Telephone: (614) 292-6717 Fax: (614) 292-4315

Science, mathematics, and environmental education at all levels, and within these three broad subject areas, the following topics: development of curriculum and instructional materials; teachers and teacher education; learning theory/outcomes (including the impact of parameters such as interest level, intelligence, values, and concept development upon learning in these fields); educational programs; research and evaluative studies; media applications; computer applications.

ERIC Clearinghouse for *Social Studies/Social Science Education* (SO)
Indiana University
Social Studies Development Center
2805 East 10th Street, Suite 120
Bloomington, Indiana 47405-2373
Telephone: (812) 855-3838 Fax: (812) 855-7901

All levels of social studies and social science education; content of the social science disciplines; applications of theory and research to social science education; contributions of social science disciplines (anthropology, economics, geography, history, sociology, social psychology, political science); education as a social science; comparative education (K-12); content and curriculum materials on "social" topics such as law-related education, ethnic studies, bias and discrimination, aging, adoption, womens' equity, and sex education.

ERIC Clearinghouse on *Teacher Education* (SP)
American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, N.W., Suite 610
Washington, D.C. 20036-2412
Telephone: (202) 293-2450 Fax: (202) 457-8095

School personnel at all levels; teacher selection and training, preservice and inservice preparation, and retirement; the theory, philosophy, and practice of teaching; curricula and general education not specifically covered by other clearinghouses; all aspects of physical education, health education, and recreation education.

ERIC Clearinghouse on *Tests, Measurement, and Evaluation* (TM)
American Institutes for Research (AIR)
Washington Research Center
3333 K St., N.W.
Washington, DC 20007-3893
Telephone: (202) 342-5060 Fax: (202) 342-5033

Tests and other measurement devices; methodology of measurement and evaluation; application of tests, measurement, or evaluation in educational projects or programs; research design and methodology in the area of testing and measurement/evaluation; learning theory in general.

ERIC Clearinghouse on *Urban Education* (UD)
Teachers College, Columbia University
Institute for Urban and Minority Education
Main Hall, Room 300, Box 40
525 W. 120th Street
New York, New York 10027-9998
Telephone: (212) 678-3433 Fax: (212) 678-4048

Programs and practices in public, parochial, and private schools in urban areas and the education of particular racial/ethnic minority children and youth in various settings — local, national, and international; the theory and practice of educational equity; urban and minority experiences; and urban and minority social institutions and services.

Educational Resources Information Center (Central ERIC)
U.S. Department of Education
Office of Educational Research and Improvement (OERI)
555 New Jersey Ave., N.W.
Washington, D.C. 20208-5720
Telephone: (202) 357-6289 Fax: (202) 357-6859

ERIC Processing & Reference Facility
ARC Professional Services Group
Information Systems Division
2440 Research Boulevard, Suite 400
Rockville, Maryland 20850-3238
Telephone: (301) 258-5500 Fax: (301) 948-3695

ERIC Document Reproduction Service (EDRS)
Computer Microfilm Corporation (CMC)
3900 Wheeler Avenue
Alexandria, Virginia 22304-6409
Telephone: (703) 823-0500
(800) 227-3742 Fax: (703) 823-0505

Oryx Press
2214 North Central Avenue at Encanto
Phoenix, Arizona 85004-1483
Telephone: (602) 254-6156
(800) 457-6799 Fax: (602) 253-2741

ACCESS ERIC
Aspen Systems Corporation
1600 Research Boulevard
Rockville, Maryland 20850-3166
Telephone: (301) 251-5486
(800) 873-3742 Fax: (301) 251-5212

ERIC Ready Reference #7
Revised January 1990

ERIC Fact Sheet*

I. Database Building

A. Documents	
1. Documents Evaluated Annually for Possible Addition to ERIC Database	25,000
2. Documents Added to ERIC Database (*Resources in Education* file)	
a. Monthly (Average)	1,025
b. Annually (Current Level)	12,500
c. To Date (1966 through December 1989)	302,187
B. Journal Articles	
1. Journal Titles Covered (i.e. regularly analyzed for education-related articles)	762
2. Journal Articles Added to ERIC Database (*Current Index to Journals in Education* file)	
a. Monthly (Average)	1,500
b. Annually (Current Level)	18,000
c. To Date (1969 through December 1989)	394,599
C. Total Accessions in ERIC Database (1966-1989)	696,786
D. Organizations Contributing Documents to ERIC	
1. Total to Date (1966-1989)	~32,000
2. Active Within Last Five Years	12,000
3. Standing Acquisition Arrangements (Organizations Automatically Sending ERIC Their Documents)	1,250

II. Document Delivery

A. Microfiche Production Activity	
1. Titles Microfiched	
a. Monthly (per RIE issue)	1,000
b. Annually	12,000
2. Microfiche Cards per Title (Average)	1.4
3. Microfiche Cards Delivered per Subscriber	
a. Monthly (per RIE issue)	1,400
b. Annually	16,500
B. Sales Activity (from EDRS)	
1. Standing Order Subscriptions for ERIC Microfiche	820
2. Microfiche Cards Sold Annually (in 1989)	
a. Standing Order Subscriptions	14,951,312
b. Back Collections	4,306,816
c. Collections by Clearinghouse	114,069
d. On Demand Orders	22,266
	Total 19,394,463
3. On-Demand Document Orders Processed Annually (Microfiche or Paper Copy)	12,000

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* Many of the statistics reported here are constantly changing and therefore have been rounded.

III. Publications

A. ERIC Clearinghouse Publications (all types) (1967-1989)	5,472
B. ERIC Digests (Highlights and syntheses of research findings on major topics)	
1. Total ERIC Digests (through 1989) (Increase Approx. 160/yr.)	~850
2. ERIC Digests Available Online	318
C. Abstract Journals	
1. Subscriptions to *Resources in Education* (RIE)	2,000
2. Subscriptions to *Current Index to Journals in Education* (CIJE)	1,800

IV. User Services

A. Subscriptions to ERIC Magnetic Tapes	40
B. ERIC Information Service Providers	
1. Offering Access to ERIC Microfiche Collections and Other Services	
a. Domestic	791
b. Foreign	114
	Total 905
2. Offering Computer Searches of ERIC Database	500
C. Inquiries/Questions Answered Annually	
1. ERIC Facility	3,000
2. Clearinghouses (16)	115,000
D. ERIC on CD-ROM Subscriptions (All Vendors)	~1500
E. ERIC Online Searching Usage (Connect Hours — All Vendors)**	~100,000

V. Authority Lists

A. *Thesaurus of ERIC Descriptors*	
Total Vocabulary Terms (as of 11th edition, 1987)	9,459
B. *Identifier Authority List*	
Total Identifiers (as of June 1987)	41,149
C. *Institutional Source Directory* (Complete)	
Organizations/Institutions that have Contributed Documents to the ERIC Database (as of December 1988)	29,647
D. Other Authority Lists	
a. Languages	168
b. Geographic Locations	217
c. Publication Types	38
d. Government Levels	5
e. Target Audiences	11

** Includes DIALOG, BRS, ORBIT, and Foreign Vendors

ERIC Ready Reference #11
March 1990

ERIC Microfiche Statistics
(Resources in Education, 1966-1989)

Year	Accession Range	Total Documents	Documents Filmed *	% Filmed	Total Fiche Cards	Fiche Per Document **	EDRS Price For Backfile MF (@ .086/Fiche) ***
1966-1967	ED-010 000- ED-012 348	2,349	2,347	99.9	4,426	1.89	$ 380.64
1968	ED-012 349- ED-021 151	8,803	6,946	78.9	13,679	1.97	1,176.39
1969	ED-021 152- ED-031 604	10,453	8,331	79.7	15,899	1.91	1,367.31
1970	ED-031 605- ED-042 060	10,456	8,448	80.8	16,188	1.92	1,392.17
1971	ED-042 061- ED-054 390	12,330	9,728	78.9	18,893	2.17	1,624.80
1972	ED-054 391- ED-066 620	12,230	10,079	82.4	19,555	1.94	1,681.73
1973	ED-066 621- ED-080 787	14,167	11,623	82.0	17,031	1.47	1,464.67
1974	ED-080 788- ED-095 253	14,446	12,175	84.3	17,800	1.46	1,530.80
1975	ED-095 254- ED-110 594	15,341	13,390	87.3	19,938	1.49	1,714.67
1976	ED-110 595- ED-127 413	16,819	14,660	86.8	20,891	1.43	1,796.63
1977	ED-127 414- ED-142 684	15,271	13,842	90.6	19,911	1.44	1,712.35
1978	ED-142 685- ED-157 987	15,303	14,196	92.8	20,689	1.46	1,779.25
1979	ED-157 988- ED-174 743	16,756	15,816	94.4	22,378	1.41	1,924.51
1980	ED-174 744- ED-190 736	15,993	15,436	96.5	22,645	1.47	1,947.47
1981	ED-190 737- ED-205 670	14,934	14,459	96.8	21,233	1.47	1,826.04
1982	ED-205 671- ED-219 495	13,825	13,203	95.5	19,213	1.46	1,652.32
1983	ED-219 496- ED-233 122	13,627	13,099	96.1	18,772	1.43	1,614.39
1984	ED-233 123- ED-247 369	14,247	13,977	98.1	19,651	1.41	1,689.99
1985	ED-247 370- ED-260 172	12,803	12,609	98.5	17,636	1.40	1,516.70
1986	ED-260 173- ED-272 646	12,474	12,220	98.0	16,630	1.36	1,430.18
1987	ED-272 647- ED-284 955	12,309	12,069	98.7	16,264	1.35	1,398.70
1988	ED-284 956- ED-297 084	12,129	11,871	97.9	16,322	1.37	1,403.69
1989	ED-297 085- ED-309 233	12,149	11,823	97.3	15,972	1.32	1,373.59
	TOTALS	302,187	272,347	90.1	411,616	1.51	$35,398.99

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*Includes Level 1 (microfiche and paper copy) and Level 2 (microfiche only) accessions. Does not include Level 3 accessions (i.e. those not reproduced by ERIC). Level 3 accessions (once as high as 21%) are currently running at less than 3% of total accessions. Beginning in 1989, Level 3 accessions are represented in the microfiche collection by a single "place holder" fiche containing solely the resume for the missing document.

**The majority of documents (about 65%) fit on one microfiche (98 frames). The average number of microfiche per ED accession is currently running at approximately 1.4 fiche per accession.

***The price of $.086 per fiche card for backfile microfiche was effective January 1990

ERIC® USERS' INTERCHANGE

September 1990

SPECIAL INTEREST NEWS FOR INTERCHANGE READERS

Interchange readers will be interested to know of the recent publication of a new edition of the Thesaurus and the availability of ERIC Digests Online.

New Thesaurus of ERIC Descriptors

Oryx Press, one of ERIC's support components, is pleased to announce the new Thesaurus of ERIC Descriptors, 12th Edition--1990. It is the fifth Thesaurus that ERIC and Oryx Press have published together since 1980. The new Thesaurus is 8 1/2 x 11, clothbound, and is 640 pages. It contains 282 new terms.

- The Thesaurus of ERIC Descriptors, 12th Edition--1990 is a guide to the latest education terms for use when searching CIJE, RIE or the electronic ERIC database. The Thesaurus costs $69.50 and includes nearly 10,000 terms which cover the entire ERIC collection of documents, program descriptions and evaluations, journal articles, and other published and unpublished works.

To order, contact Oryx Press, 4041 North Central Avenue, Suite 700, Phoenix, AZ 85012; 1-800-279-ORYX.

Oryx Press is a commercial publishing firm that produces and markets the Thesaurus as well as the Current Index to Journals in Education.

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ERIC Digests Online

Another valuable resource to ERIC users, particularly busy teachers and school administrators, is ERIC Digests Online. Some questions ERIC users may have are:

The ERIC Users' Interchange was prepared by ACCESS ERIC, a project of Aspen Systems Corporation under contract #RI890120 for the Office of Educational Research and Improvement, U.S. Department of Education. Contractors undertaking such projects under Government sponsorship are encouraged to express their judgment in professional and technical matters. Points of view or opinions do not necessarily represent official Department of Education positions or policies. All questions, correspondence, and contributions should be directed to the Editor of the Interchange, ACCESS ERIC, 1600 Research Blvd., Rockville, MD 20850; 1-800-USE-ERIC.

What Are ERIC Digests?

ERIC Digests are short reports on current topics written especially for teachers, administrators, policymakers, and other education practitioners. Titles include "Qualities of Effective Writing Programs," "Promotion Policies in Urban High Schools," and "Escalating Kindergarten Curriculum."

In addition to offering a review and synthesis of information useful to busy practitioners, each Digest includes a brief bibliography of recent materials on the subject. Digests are produced and printed by the 16 ERIC Clearinghouses.

What Is ERIC Digests Online?

More than 470 full-text ERIC Digests are currently available online to users through DIALOG. These Digests will soon be available from other online services as well, including the GTE Education Network and PLATO. The Digest file will be expanded on a regular basis, with approximately 160 Digests added annually.

How can online Digests be accessed?

Using DIALOG online, digests selected for full-text treatment can be retrieved by using Publication/Document Type Code 073. Then, "Format 9" can be used to print/display the full text along with the bibliographic citation.

For more information on how to access ERIC Digests Online through DIALOG, contact DIALOG Information Services, 3460 Hillview Avenue, Palo Alto, CA 94304; 1-800-334-2564.

For more information on the availability of ERIC Digests Online through other vendors, call ACCESS ERIC at 1-800-USE-ERIC.

ERIC SYSTEM NEWS

ERIC Adds New Adjunct Clearinghouse

As new educational needs evolve, the ERIC System adds to its network of Clearinghouses to ensure that its users have access to relevant information. These new additions, referred to as Adjunct Clearinghouses, are usually associated with existing Clearinghouses.

The ERIC System announces the addition of its fourth Adjunct, the Adjunct Clearinghouse on Chapter 1. (The ERIC System's three other Adjunct Clearinghouses cover Literacy Education for Limited-English-Proficient Adults, Art Education, and United States-Japan Studies.)

In June 1990, the Chapter I Technical Assistance Center Materials Clearinghouse agreed to become ERIC's newest Adjunct. The Clearinghouse is located in Indianapolis and is managed by Advanced Technology, Inc.

Chapter 1, (originally Title I), is a federally-funded compensatory education program established in 1965 under the Elementary and Secondary Education Act. In 1981, Title I was replaced by Chapter 1 of the Education Consolidation and Improvement Act. This Act allocates funds to school districts with large numbers of disadvantaged children and children exhibiting low achievement levels. The network of Chapter 1 Technical Assistance Centers (TACs) and Rural Technical Assistance Centers (R-TACs) is funded by the U.S. Department of Education to help State and local education agencies evaluate and improve their compensatory education programs.

The TAC Materials Clearinghouse is responsible for acquiring and maintaining workshop materials and documents produced or adapted by the network of Technical Assistance Centers. For more information, please contact:

Dr. Mary Quilling, Director
Chapter 1 Technical Assistance Center
Advanced Technology, Inc.
2601 Fortune Circle, East, Suite 300-A
Indianapolis, IN 46241
(317) 244-8160
1-800-456-2380
FAX: (317) 244-7386

ERIC Database News

Information about ERIC users comes from many sources. One such source, commercial online ERIC vendors, reports colleges and universities as the most frequent users (about 40 percent), followed by medical professionals and school districts.

Although online use of the ERIC database is comparable to last year, hundreds of university, school and public libraries are rapidly acquiring the popular CD-ROM workstations. ERIC's easy-to-use format, which requires minimal assistance and recordkeeping, accounts for much of this popularity.

ERIC is also becoming more popular worldwide. Today, ERIC is the fourth most popular media product in European libraries.

Who's Who/Who's New in ERIC

The ERIC System is pleased to welcome the following people to their new posts as Directors:

- In July 1990, ACCESS ERIC welcomed Beverly Swanson as its new Project Director. Beverly, a former associate professor at East Carolina University, holds a doctorate degree in early childhood education with curricula emphases at the master's level in social studies and science education. Her research interests include beginning reading instruction. Beverly can be reached at 1-800-USE-ERIC. The former director, Samuel Fustukjian, returned to the University of South Florida at St. Petersburg to resume his position as director of the Nelson Poynter Memorial Library. Sam was Project Director from May 1989-May 1990.
- Charles Bissinger also joined the ERIC family as the new director of the ERIC Document Reproduction Service in March 1990. Chuck earned his Master's degree from St. Paul's School of Theology and served as Director of Microfilm Services for the Columbia Lighthouse for the Blind before joining EDRS. Chuck can be reached at 1-800-227-ERIC (outside Virginia) or (703) 823-0500 (in Virginia).
- Michael Eisenberg and Donald Ely reversed their previous roles at the ERIC Clearinghouse on Information Resources last month. Mike, the new director, is an associate professor in the School of Information Studies at Syracuse University, with specialties in school library media and user-based information systems. The new associate director, Don, is Chair of the Instructional Design, Development and Evaluation Program in the School of Education at Syracuse. Don served as director of the Clearinghouse since 1977, contributing his leadership, creativity and expertise in the field of educational technology. This is the first time that ERIC Component directors have switched roles.

ERIC Clearinghouse on Rural Education and Small Schools To Establish Library Consortia

The ERIC Clearinghouse on Rural Education and Small Schools is collaborating with its host institution, the Appalachia Educational Laboratory (AEL), to develop the Rural, Small Schools Program for the 1990-92 contract period.

This program will establish a rural high school library consortium, linking high school and college libraries. ERIC on CD-ROM is one of the technologies proposed for consortium use, together with other CD-ROM and online databases, videodisc technology, FAX communications, and videotape resources.

ERIC PRODUCTS AND SERVICES

The ERIC System is constantly updating and developing new services and products for ERIC users. Some are currently available; others will be available in the near future. Refer to future issues of the Interchange for announcements.

ERIC Added to EPIC Reference Service

The ERIC database is now available via OCLC EPIC service, a full-featured online reference system providing subject access and key word and Boolean searching to a variety of databases. ERIC is the second database offered by EPIC, which began in January 1990 with the OCLC Online Union Catalog.

OCLC lists the following advantages to the ERIC/EPIC service:

- Competitive online costs on a per-search basis.
- Standardized command language.
- Compatibility with OCLC's CD-ROM reference products.
- Ability to move easily from ERIC database citations to OCLC database holdings information.

To select the ERIC database, EPIC users should enter the command "CHOOSE ERIC" or "CHOOSE 1," the ERIC database number. To view complete ERIC prices, EPIC users should select the ERIC database and enter the command "SHOW PRICES." PERIC, a practice ERIC database, is accessed by entering the command "CHOOSE PERIC" or "CHOOSE 901."

Online connect charges for ERIC are $19.80 per hour, and record displays are priced up to $ .15 each. Online connect charges for PERIC are $6.00 per hour and record displays are free.

OCLC is a nonprofit computer library service and research organization whose computer network and products link more than 10,000 libraries in 39 countries.

For further information, contact one of the following at OCLC: Tam Dalrymple at (614) 761-5054; or Phil Schieber at (614) 764-6144.

Compact ERIC and ERIC Schooldisc

The ERIC System is presently working with a major corporation to investigate the expansion of ERIC services to include full-text information for users through CD-ROM. Once developed, these products, called Compact ERIC and ERIC SchoolDisc, will provide the full text of 2,000 to 3,000 documents and journal articles of particular interest to teachers and administrators. Compact ERIC and ERIC Schooldisc will play a significant role in providing ERIC information to audiences who lack sufficient time and/or access to the ERIC database or document collection.

ACCESS ERIC Databases Available Through GTE Education Services

ACCESS ERIC is working with GTE Education Services (GTE ES) to offer up-to-date research and referral databases to the education community. These databases, described below, will be available on a subscription basis to anyone with a PC and a modem.

- The **Education-Related Information Centers** database lists organizations providing information relevant to education, including subjects covered, intended audiences, and contact person.
- The **ERIC Information Service Providers** database lists worldwide organizations providing ERIC System services and products.
- The **ERIC Calendar of Education-Related Conferences** database lists information on a wide variety of international, national, State, and regional education-related conferences, including beginning and ending dates, conference sponsor and contact, intended audience, and subjects covered.

These databases will be available to users in October 1990. Current subscribers to GTE ES will have immediate access to them. For further information, call ACCESS ERIC, toll-free, at 1-800-USE-ERIC.

Search Aids Available

Two search aids are available from the ERIC Clearinghouse on Handicapped and Gifted Children to assist online users of both the ERIC and the Exceptional Child Education Resources (ECER) databases. The two products: Searching ERIC and ECER Disabilities Descriptors on BRS and Searching ERIC and ECER Disabilities Descriptors on DIALOG list descriptors and identifiers in DIALOG and BRS formats in the following areas: general special education, disabilities, giftedness, education, health and psychology.

Copies are available free from the ERIC Clearinghouse on Handicapped and Gifted Children, Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091-1589; (703) 620-3660.

New Speed-Search Service Available

Speed-Search, a service of the ERIC Clearinghouse on Educational Management, is available to help educators, administrators, and policymakers acquire the most current research on educational management topics.

Speed-Searches consist of resumes (bibliographic information and abstracts or annotations) from ERIC's two reference indexes: Resources in Education (RIE) and Current Index to Journals in Education (CIJE). The information is downloaded to a printout from the latest SilverPlatter ERIC on CD-ROM. If the lag time has been more than 2 months, the information will be supplemented by an online search (using DIALOG Information Services, Inc.) that covers the months between the latest CD-ROM and the current online entries.

Speed-Searches cost $30.00, plus the cost of all computer access time and handling fees. Costs seldom exceed $35.00. Requests for Speed-Searches are taken by the ERIC Clearinghouse on Educational Management, weekdays, between 1:00 and 3:00 p.m. (PST). For more information, call (503) 346-5043.

Planning for CD-ROM in Your Library?

Rosemary Thorne, reference librarian at San Jose State University, presented her paper entitled "Points To Consider in Planning for CD-ROM" at the Fall 1989 Standing Order Customer Workshop held in Berkeley, California, by the ERIC Clearinghouse for Junior Colleges. The paper includes a discussion of the implications of introducing CD-ROM technology into a library. It also discusses CD-ROM product selection, hardware, cost budgeting, administrative/staffing considerations, and workspace considerations.

For a free copy, contact the ERIC Clearinghouse for Junior Colleges, University of California at Los Angeles, 8188 Math-Sciences Building, Los Angeles, CA 90024; (213) 825-3931.

NEW PUBLICATIONS NOW AVAILABLE FROM ERIC

New publications are continually generated by ERIC Clearinghouses and Support Components. ACCESS ERIC publications acquaint ERIC users with general ERIC information; subject-specific Clearinghouse publications provide users with a variety of information to meet their specific educational needs.

New Titles Available From ACCESS ERIC

- The ERIC Review is a publication providing education practitioners with education research and news they can use.

  This new journal is published three times a year, and is designed to help the education community stay informed of recent research findings and critical trends and issues in education. It is also a tool for announcing important ERIC System developments, new products and services.

  The ERIC Review is written for education practitioners, especially teachers, professors, principals, and education students. Information in The ERIC Review will also be useful to librarians, researchers, school administrators, and others who need to stay abreast of developments in education.

  For subscription information, call ACCESS ERIC at 1-800-USE-ERIC.

- The recently revised Pocket Guide to ERIC briefly describes the resources available through ERIC and serves as a quick reference for answers to commonly-asked questions. It provides a directory of ERIC Clearinghouses and telephone numbers of other ERIC-related information sources.

- All About ERIC offers a detailed description of the ERIC System, explaining how to use ERIC products and services and providing information on how organizations can become ERIC Partners. All About ERIC is a useful reference tool for librarians, educators, and students, providing information on searching the ERIC database, obtaining ERIC documents, and submitting documents for inclusion in the database. Bulk quantities of both publications are available upon request to schools, libraries, and other organizations.

- The 1991 ERIC Calendar of Education-Related Conferences will be available to the public in late December 1990. Designed to help practitioners stay abreast of events scheduled for the next 12 months, this edition includes information on a wide variety of international, national, State, regional, and local education-related conferences. The Calendar features five indexes that allow users to identify conferences of interest quickly and easily:

  --Conference Name Index
  --Date Index
  --Geographic Location Index
  --Sponsor Index
  --Subject Index

  For complete ordering and price information, call ACCESS ERIC in December at 1-800-USE-ERIC.

- The Directory of ERIC Information Service Providers lists more than 900 organizations that provide access to the ERIC database and related resources. The Directory is designed to help users quickly locate nearby organizations where ERIC and other resources are available. Entries include hours of operation and charges for special services. This Directory also features an alphabetical organization index and fewer entries per page, for enhanced readability.

- The 1991 Catalog of ERIC Clearinghouse Publications offers a complete listing of titles currently available from the ERIC System. Many of these titles are available free. This Catalog includes a complete subject index indicating which specific Clearinghouse publishes each title, and also includes ordering information. The Catalog is available for $8.00.

- The Conclusion Brochure series is designed especially for parents and teachers, and provides practical information such as answers to commonly-asked questions, organizations to call for help, and additional reading materials. Titles in the series are:

  -- How Can Elementary Science Education Be Improved?
  -- How Can We Keep Students in School?
  -- Why Don't Our Children Like Math?
  -- How Can Parents Get More Out of School Meetings?
  -- How Do I Help My Child Say "No" to Drugs?
  -- Is Repeating a Grade a Sign of Failure?
  -- What Alternatives Do Public Schools Offer?
  -- Should Gifted Students Be Grade Advanced?

To order these ACCESS ERIC publications, call 1-800-USE-ERIC.

New From the ERIC Clearinghouse on Adult, Career, and Vocational Education

- Trends and Issues Alerts, 1988-1990
  Provide information on emerging trends and issues, including a brief description and a list of ERIC and non-ERIC information resources. Developed for policymakers, journalists and professional associations. Topics include:

  -- Access and Equity in Vocational Education
  -- Adult Literacy
  -- Career Education for Teen Parents
  -- Career Education for the Limited English Proficient
  -- Certification in Adult Education
  -- Entrepreneurship Education
  -- Environmental Adult Education
  -- The Multi-Cultural Workforce
  -- The New Work Force

- Nontraditional Occupations: A Status Report
- Older Workers
- Role of Vocational Education at the Secondary Level
- Vocational Education in Corrections
- Workplace Literacy

These publications are available through the ERIC Clearinghouse on Adult, Career, and Vocational Education, Ohio State University, Center on Education and Training for Employment, 1900 Kenny Road, Columbus, Ohio 43210-1090; (800) 848-4815.

New From the ERIC Clearinghouse on Counseling and Personnel Services

- Comprehensive Guidance Programs That Work, 1990
  Norman C. Gysbers and Guidance Program Field Writers; $18.95
  ED 314 660
  Describes successful guidance programs in eight schools in six states; includes suggestions for making K-12 school guidance programs more comprehensive.

- Invitational Learning for Counseling and Development, 1990
  William W. Purkey and John J. Schmidt; $16.95
  ED 314 708
  Explains how integrating the principles of invitational learning and counseling into guidance programs was a positive force for change in seven different school settings; discusses this approach for responding to students at risk and minimizing dropouts.

- The Teacher Advisor Program: An Innovative Approach to School Guidance, 1990
  Robert D. Myrick and Linda S. Myrick; $16.95
  ED 316 791
  Describes six teacher advisor programs that creatively meet the developmental needs of middle and high school students by providing them with a friendly adult in the school who knows and cares about them.

These publications are available through the ERIC Clearinghouse on Counseling and Personnel Services, University of Michigan, School of Education, Room 2108, 610 East University Street, Ann Arbor, MI 48109-1259; (313) 764-9492.

New From the ERIC Clearinghouse on Educational Management

- The Collaborative School: A Work Environment for Effective Instruction, 1990
  Stuart C. Smith and James J. Scott; $8.00 plus $2.50 handling
  ED 316 918
  Outlines the educational benefits of collaboration; describes a variety of collaborative practices already in use in schools; suggests ideas for introducing those practices in other schools that wish to become more collaborative.

This publication is available through the ERIC Clearinghouse on Educational Management, University of Oregon, 1787 Agate Street, Eugene, OR 97403-5207; (503) 686-5043.

New From the ERIC Clearinghouse on Handicapped and Gifted Children

- The ERIC Clearinghouse on Handicapped and Gifted Children (ERIC/EC) announces a series of INFOPackets, each containing 10 items, including Digests and similar documents from projects serving people with disabilities.

The topics include:

- Handicaps
- Delivery of Special Education: Administrative Concerns
- Instructional Strategies for Students with Cognitive Disabilities
- Social Integration of Children and Youth with Disabilities
- Computer Technology in Special Education

Other projects contributing to the INFOPackets include the Office of Special Education Programs' Special Project on Interagency Information Dissemination; The Center for Special Education Technology; and The Research and Training Center for Independent Living.

- ERIC/EC also announces its new Flyer File for Gifted Students, containing 10 two-page Digests, 10 four-page Digests and a bibliography. The material is packaged in a folder labeled Gifted Students, and will fit directly in a file drawer for easy reference.

INFOPackets are available for $10.00 each; the Flyer File is available for $22.50. (Members of the Council for Exceptional Children receive a 20 percent discount.) For more information on these products, contact the ERIC Clearinghouse on Handicapped and Gifted Children, Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091-1589; (703) 620-3660.

New from the ERIC Clearinghouse on Information Resources

- Distance Education and the Changing Role of the Library Media Specialist, 1989
  Michael A. Burke
  IR 053 316
  Presents an overview of the current status of telecommunications-based distance education at the K-12 level in the U.S.; describes a potential, pivotal level role for the school library media specialist in the facilitation of instructional programs delivered via various technologies. $5.00 plus $1.50 for shipping and handling.

- Trends and Issues in Educational Technology, 1989
  Donald P. Ely
  IR 014 504
  Identifies and discusses 11 trends determined through a modified content analysis of the literature for the field, including four representative professional journals, the proceedings of three conferences, dissertations from five universities, and ERIC input during the year. $4.00 plus $1.50 for shipping and handling.

- Instructor's Guide for Teaching Online Searching
  $5.00; (free with purchase of MICROsearch). Includes goals and objectives, suggested course outline and support material, two self-instructional, self-testing worksheets for students to illustrate and reinforce important concepts; includes information on how to conduct a computerized online search.

- ERIC MICROsearch
  $49.00
  Designed for use by those without training or experience in online searching, this computer-based online search system uses a series of menus to guide the student through the search process. Compatible with IBM PC and Apple computers (other than Macintosh). The set includes program and database disks and user's manual.

For more information on these products, contact the ERIC Clearinghouse on Information Resources, Syracuse University, School of Education, 030 Huntington Hall, Syracuse, NY 13244-2340; (315) 443-3640.

New from the ERIC Clearinghouse on Rural Education

- The Application of Video Disc Technology in Preservice Teacher Training, 1989
  Charles L. Salzberg, et al; $2.03 plus postage
  ED 315 231
  Contains four units: a five-step sequence to monitor student responses, reinforce accurate performance, and correct errors; information on the use of modeling, physical prompts and leading questions to help students arrive at correct answers; a discussion on how to minimize problem behavior and encourage attention to work; and strategies for teaching overly dependent, careless or mildly disruptive students.

This document is available through EDRS; 1-800-227-3742 (outside Virginia) or (703) 823-0500 (inside Virginia).

- Unbiased Teaching About American Indians and Alaska Natives in Elementary Schools, 1990
  Floy C. Pepper; free
  RC 017 857
  Provides realistic information about this growing population; identifies common myths about American Indians and Alaska Natives that contribute to curriculum bias; and suggests activities and resources to help elementary students and teachers see how Indians live today and how they lived in the past.

- The Case Method in Teacher Education: Alaskan Models, 1990
  Judith Kleinfeld; free
  RC 017 854
  Describes the theoretical basis of the case method and examines its strengths and limitations; identifies sources of teaching cases and suggests methods of application. Intended for teacher educators, student teachers, and practicing teachers.

These publications are available from the ERIC Clearinghouse on Rural Education and Small Schools, Appalachia Educational Laboratory, 1031 Quarrier Street, P.O. Box 1348, Charleston, WV 25325-1348; (800) 624-9120 (outside WV), (800) 344-6646 (inside WV).

New from the ERIC Clearinghouse on Social Studies/Social Science Education

- James Madison and *The Federalist Papers*, 1990
  John J. Patrick; $15.00 plus $2.00 shipping
  SO 030 251
  Includes resources for high school history and government teachers and their students; treats core ideas and issues on constitutional government in the United States; focuses on seven of Madison's papers in *The Federalist*; and is designed to link his ideas to their counterparts in essays of the Anti-Federalists.

For more information, contact the ERIC Clearinghouse for Social Studies/Social Science Education, Indiana University, Social Studies Development Center, 2805 East 10th Street, Suite 120, Bloomington, IN 47408-2373; (812) 855-3838.

The following Attachments have been included: articles on Hypertext and Hypermedia; Digest ordering form; a map of worldwide ERIC service providers; RIE index information.

The *ERIC Users' Interchange* is published twice a year by ACCESS ERIC.

Editor .... Terri Bourbon
Assistant Editor .... Kelly Gainer

Look for the next issue in March 1991.

ERIC

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ERIC DIGEST

August 1989

EDO-IR-89-5

Hypertext: Behind the Hype

by Ann F. Bevilacqua

What is hypertext?

Hypertext is an organizing principle, like the 15th-century invention of alphabetical order or the Platonic invention of dialectical argument. Ted Nelson, who coined the word in the 1960s, defines "hyper" as "extended, generalized, and multidimensional" (1973). Michael Heim writes, "text derives originally from the Latin word for weaving and for interwoven material, and it comes to have an extraordinary accuracy of meaning in the case of word processing" (1987, p. 160-161).

This image of a multidimensional fabric of knowledge linked with all its intellectual antecedents is one that is familiar to librarians. In a sense, we've been advocates of hypertext all along; encyclopedias, card catalogs, citation indexes, and abstracts all make up this invisible web of knowledge. As librarians, we are used to such organization; in fact, it remains central to our way of teaching others how the library works. However, the electronic hypertext document has few of the built-in frustrations of the paper system.

The essence of hypertext is a dynamic linking of concepts allowing the reader to follow preferences instantaneously and to be in control. The scope of a topic is no longer defined by editor or author and is limited only by the initiative of the reader. As Heim explains, "instead of searching for a footnote or going to find another document referred to, the dynamic footnote, or link, can automatically bring the appended or referenced material to the screen. The referenced material could be a paragraph or an article or an entire book. A return key brings the reader back to the point in the original text where the link symbol appeared" (1987, p. 162). The reader may also choose, however, not to follow diversions, but to continue through a particular document without interruption. It is this interactivity with the database that is the key to hypertext systems; pictures, sound, and text can be instantly retrieved according to the user's needs or whims.

The term "hypertext" is actually a misnomer, as many of the current systems allow and even encourage the inclusion of non-text data such as graphics, animations, and digitized sounds. In the future, the more precise "interactive hypermedia" will probably replace the term hypertext since, in a digital world, sound, text, and images are all represented by the same binary signals, and microcomputers are evolving to take advantage of these new capabilities. Eventually, CD-quality stereo sound and high-resolution video display will be available from the same device—a television, computer, and stereo all in one box.

Currently there are two types of hypertext: static and dynamic (Byers, 1987, p. 250). Static hypertext does not permit changes to the database, but it is interactively browsable. In dynamic hypertext the user may add or subtract data and links. An important aspect of many dynamic hypertext systems is the ability to maintain multiple versions of a document as it changes over time. This allows the writer to track the history of a document and weigh alternative versions simultaneously. In a multi-user environment, this allows the original writer to maintain the first version of a document even after others have changed it.

Current Applications

Prototype applications are under development at several educational institutions. At present, however, these projects are not commercially available except as demonstration packages.

- **Intermedia at Brown.** Hypertext research has been going on at Brown University since the late 1960s. Over the years, many hypertext systems have been developed; since 1985, the Institute for Research in Information and Scholarship (IRIS) has been working on Intermedia, a large-scale multimedia system that currently runs on a network of IBM RT/PCs using the UNIX operating system and Sun workstations that support Sun's Network File System (Yankelovich, Landow, & Cody, 1987, p. 3).

  Two courses—Plant Cell Biology and English Literature from 1700 to the Present—were chosen initially to be part of the project. *Context32, the English Corpus* is the name of the database developed for the English course. It contains biographical sketches of each author under study as well as essays and discussions of styles and techniques. A database of images comprises another category; portraits, photographs, drawings, and reproductions of works of art allow students to juxtapose image and text for the same historical period (Yankelovich et al., 1987, p. 7). Students explore the database for their reading and research assignments, and as part of a final project they are expected to contribute essays, drawings, and links to the database corpus.

- **Harvard's Perseus Project.** The Perseus Project of Harvard University is developing interactive courseware on classical Greek civilization using *HyperCard*. The preliminary database currently includes a historical atlas of the Persian Wars, an archaeological catalog, and texts of Greek tragedies. Plans call for expanding the database to approximately 70 megabytes of text and thousands of images. "This will include almost the entire surviving body of Greek tragedy, comedy and epic; works of major historians such as Herodotus and Thucydides; and substantial portions of the massive surviving works of Plato and Aristotle. There will be color images and measured drawings of museum objects (such as sculpture and Greek vase paintings), plans and pictures of buildings and sites in Greece, and an atlas based on Landsat images. Much of the material commonly studied in courses on classical Greece will be included in the database" (Crane, 1988, p. 51). The required hardware is a Macintosh computer; the software, *HyperCard*.

- **Project Jefferson at the University of Southern California.** Introduced in the fall of 1987, the Constitutional Notebook is a collaborative effort of the university library, the freshman writing program, and the engineering school at U.S.C. The interface was designed to organize information relating to freshman writing assignments and to build a database online to meet their needs. The program uses the metaphor of an electronic notebook to make this database more accessible to undergraduates. Recently, the Project Jefferson Team released another application, titled the Bali Notebook, that assists anthropologists and biologists in building a simulation model of a Balinese hydrological system. Both of these projects run on Apple Macintosh hardware and *Hypercard* software.

Limitations of Hypertext

As hypertext systems have progressed over the past 20 years, several problems have surfaced. Among the most vexing issues facing hypertext developers are orientation to the database, cognitive overload, and compatibility.

It is feared that readers who are used to finding their way through books with the aid of tables of contents, indexes, footnotes, and marginalia might become lost within hypertext systems. However, new visual cues are integrated into most hypertext systems to lessen feelings of disorientation. As databases grow, navigational tools such as the global map of links and documents and the history of paths taken, though complex themselves, become necessary. And, as hypertext documents develop standards, users will develop "pattern recognition" of those standards, much the same way they do with city bus maps. Over time and use, hypertext will probably change our way of thinking; perhaps, as we learn how to move non-sequentially in texts, the feeling of not knowing where we are will no longer be an issue. Perhaps, too, the notion that one can ever finish a "book" may disappear.

Another criticism of hypertext is that users are presented with so much information that their human circuits burst with cognitive overload. While reading through a document, choices must constantly be made about which links to follow and which to ignore. Following several paths at once may lead to the navigation problem described above. Although this problem is not new with hypertext, computerized access does add a sometimes overwhelming dimension to it.

The issues of standards and compatibility have yet to be addressed. Some may argue that imposing standards while hypertext is still in an experimental stage will dampen creativity, but the reality is that currently we are developing what Van Dam calls "docu-islands" of knowledge that are incompatible with one another. Just when it seems that compatibility problems of microcomputers have eased somewhat, new, more complex hyperdocument systems will make all those interconnections obsolete. It is not too soon to press for standards and compatibility to insure not only connectivity but also ease of use.

Hyperdefs
(Hypertext-related definitions)

- **Hypertext:** Non-sequential computerized text retrieval system that allows users to link associated information into a personal path through the document.
- **Hyperdocument:** A collection of documents in a hypertext system.
- **Hypermedia:** Dynamic linking of "documents" of varying formats— sounds, graphics, video, and text.
- **Global Maps:** Visual cue to all of the links possible in a hypertext document.
- **History of Paths:** A chronological map of choices taken by an individual in a hyperdocument.

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Yankelovich, Nicole, Landow, George P., and Cody, David. (1987). Creating hypermedia materials for English literature students. *SIGCUE Outlook*, 20(3).

This digest is a condensed version of the original article, "Hypertext: Behind the Hype," by Ann F. Bevilacqua, which appeared in *American Libraries* 20 (2), February 1989, pp. 158-162. Printed with permission of the American Library Association.

OERI
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Mini-Bib

HYPERMEDIA: DESIGN AND APPLICATION

A Select ERIC Bibliography prepared especially for:

The Fifth National Conference and Exhibition of the
American Association of School Librarians
October 18-22, 1989
Salt Lake City, Utah

Citations in this bibliography were selected through a computer search of the Educational Resources Information Center (ERIC) database. The term **hypermedia**, as an identifier, was used to retrieve all documents.

Ambron, Sueann and Hooper, Kristina, Eds. (Spring 1987). *Multimedia in Education*. Proceedings of Invitational Conference on Multimedia in Education, Cupertino, CA, June 19-20, 1986. *Learning Tomorrow: Journal of the Apple Education Advisory Council* [special issue] 346pp. (Available EDRS: ED 302 179).

This collection of articles exploring multimedia in education includes several pieces on hypermedia design and application. Sample titles include: "Issues in Designing a Hypermedia Document System: The Intermedia Case Study" (Nicole Yankelovich, Karen Smith, L. Nancy Garrett, and Norman Meyrowitz); "NoteCards: A Multimedia Idea Processing Environment" (Frank G. Halasz); "The Shakespeare Project" (Larry Friedlander); "Grapevine--An Excursion into Steinbeck Country" (Robert Campbell and Patricia Hanlon); "Links or Stories--A Compromise" (Bernard Frischer); "Authoring with Hypermedia" (Carol Kaehler); and "Navigation in Large Knowledge Spaces" (Stephen A. Weyer).

Beck, J. Robert and Spicer, Donald Z. (February 1988). Hypermedia in Academia. *Academic Computing* 2(5), pp. 22-25, 49-50.

Briefly reviews the origins of the hypermedia concept, comments on its use in higher education, and describes a project at Dartmouth College that developed a training process to introduce a hypermedia authoring environment to the academic community.

Gaines, Brian R. and Vickers, Joan N. (March 1988). Design Considerations for Hypermedia Systems. *Microcomputers for Information Management* 5(1), pp. 1-27.

Reviews the background, concepts, and role of hypermedia systems and analyzes essential, expected, and desirable features of hypermedia in order to provide a basis for system design and evaluation. Four hypermedium shells and systems are described, and approaches to user interface problems are discussed.

Kearsley, Greg. (November 1988). Authoring Considerations for Hypertext. *Educational Technology* 28(11), pp. 21-24. (Available UMI: EJ 384 408).

Discusses some of the major aspects of authoring hypertext documents and databases as forms of interactive instruction. Highlights include knowledge structuring; root documents; authoring tools; screen formats; computer graphics; collaboration among authors; cognitive processes; and degree of learner control.

Marchionini, Gary. (November 1988). Hypermedia and Learning: Freedom and Chaos. *Educational Technology* 28(11), pp. 8-12. (Available UMI: EJ 384 406).

Describes hypermedia and its potential uses in learning and teaching. Highlights include storage and manipulation of information; levels of learner control; the roles of teachers and learners and the interactions between them; theoretical and technical problems; instructional difficulties; and evaluation principles for hypermedia.

Smith, Karen E. and others. (March 1988). Hypertext and Information Retrieval. *Online* 12(2), pp. 32-40, 42-46. (Available UMI: EJ 377 847).

An overview of hypertext and hypermedia is followed by a description of the Intermedia system, and possibilities for using hypertext in the information industry are explored. A sidebar discusses information retrieval in the humanities using hypertext, and a 58-item annotated bibliography on hypertext is presented.

Vandergrift, Kay E. (November 1988). Hypermedia: Breaking the Tyranny of the Text. *School Library Journal* 35(3), pp. 30-35. (Available UMI: EJ 384 332).

Describes the possibilities of hypermedia stackware with emphasis on applications for youth librarians. A model for the development and evaluation of stackware is offered, and an example of a proposed hypermedia product is provided. Differences in personal interest levels and learning styles are considered, and copyright concerns are discussed.

Underwood, John. (April 1988). Language Learning and "Hypermedia." *ADFL Bulletin* 19(3), pp. 13-17.

Describes the concept of "hypermedia," by which readers select and link segments of text, audio, video, or other media in a way that helps them to explore and understand information. A case is made for the use of "hypermedia" in helping students learn and understand language through its provision of massive doses of comprehensible information.

Yankelovich, Nicole. (1986). *Intermedia: A System for Linking Multimedia Documents. IRIS Technical Report 86-2.* Providence, RI: Brown University Inst. for Research in Information and Scholarship 19pp. (Available EDRS: ED 296 735).

"Intermedia" is a hypermedia system which was developed for use in university research and teaching. It provides a framework for object-oriented, direct manipulation applications, and the capability to link together materials created with those applications. This paper provides a discussion of hypermedia systems in general, as well as a description of the Intermedia system, and illustrates the operation of the system through a sample session.

Compiled by Nancy R. Preston September 1989

Citations with EJ numbers are journal articles from *Current Index to Journals in Education*. They can be obtained from a library, borrowed through interlibrary loan, or, if so indicated, ordered from: UMI Article Clearinghouse, 300 N. Zeeb Road, Ann Arbor, MI 48106 (telephone 1-800-732-0616). $10.75 per article.

Citations with ED numbers are documents from *Resources in Education*. They can be read at a library with an ERIC microfiche collection or ordered, in microfiche or paper copy, from: ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, VA 22304 (telephone 1-800-227-3742). Prices vary.

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No-Cost Resources

September 1989

ERIC digests are short reports giving an overview of topics of current interest and suggesting literature for further reading. Minibibliographies supply annotated references to documents and journal articles in the ERIC database. Both digests and minibibliographies are in the public domain and may be reproduced freely.

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☐ Access Points to ERIC: An Update (1988)
☐ Accessing ERIC with your Microcomputer: Update (1988)
☐ Administrative Issues in Planning a Library End User Searching Program (1986)
☐ Building Databases for Education (1985)
☐ Changing Roles of the Media Specialist (1987)
☐ CD ROM for Educators (1987)
☐ Computer Assisted Instruction: Authoring Languages (1986)
☐ Computer Equity (1985)
☐ Computer Software: Copyright and Licensing Considerations for Schools and Libraries (1989)
☐ Course Integrated Library Instruction (1988)
☐ Curriculum Roles and Responsibilities of Library Media Specialists (1989)
☐ Delivery Systems for Distance Education (1988)
☐ Developing Practice Descriptions for ERIC (1986)
☐ ERIC for Practitioners (1985)
☐ ERIC on CD ROM: Update (1988)
☐ Hypertext: Behind the Hype (1989)
☐ Implementing *Information Power* (1989)
☐ Information Skills for an Information Society: A Review of Research (1987)
☐ Librarians and the Censorship Issue: Update (1988)
☐ Museums and Schools as Partners (1986)
☐ The Novice User and CD-ROM Database Services (1988)
☐ Online Information Services for Secondary School Students: A Current Assessment (1988)
☐ Optical Disk Formats: A Briefing (1988)
☐ Plugging into Computer Bulletin Boards (1986)
☐ A Reappraisal of Instructional Television (1987)
☐ Technology Options for Libraries (1988)
☐ Trends in Educational Technology: 1989
☐ Trends in Library and Information Science: 1989
☐ Videotapes: Copyright and Licensing Considerations for Schools and Libraries (1989)
☐ Videotex 1985: Educational Applications
☐ The Wired Campus (1988)

Mini-bibliographies

☐ CD-ROM in the Library: Selection, Planning and Management Issues (1988)
☐ Copyright Issues for Schools and Libraries (1988)
☐ Courseware Evaluation for Educators: Guidelines and Information Sources (1988)
☐ Distance Education at the Secondary Level (1988)
☐ Interactive Video (1987)
☐ Online Searching in Secondary Schools: Update (1988)
☐ Privatization of Government Information (1988)
☐ Training Teachers To Be Computer Literate: Update (1988)

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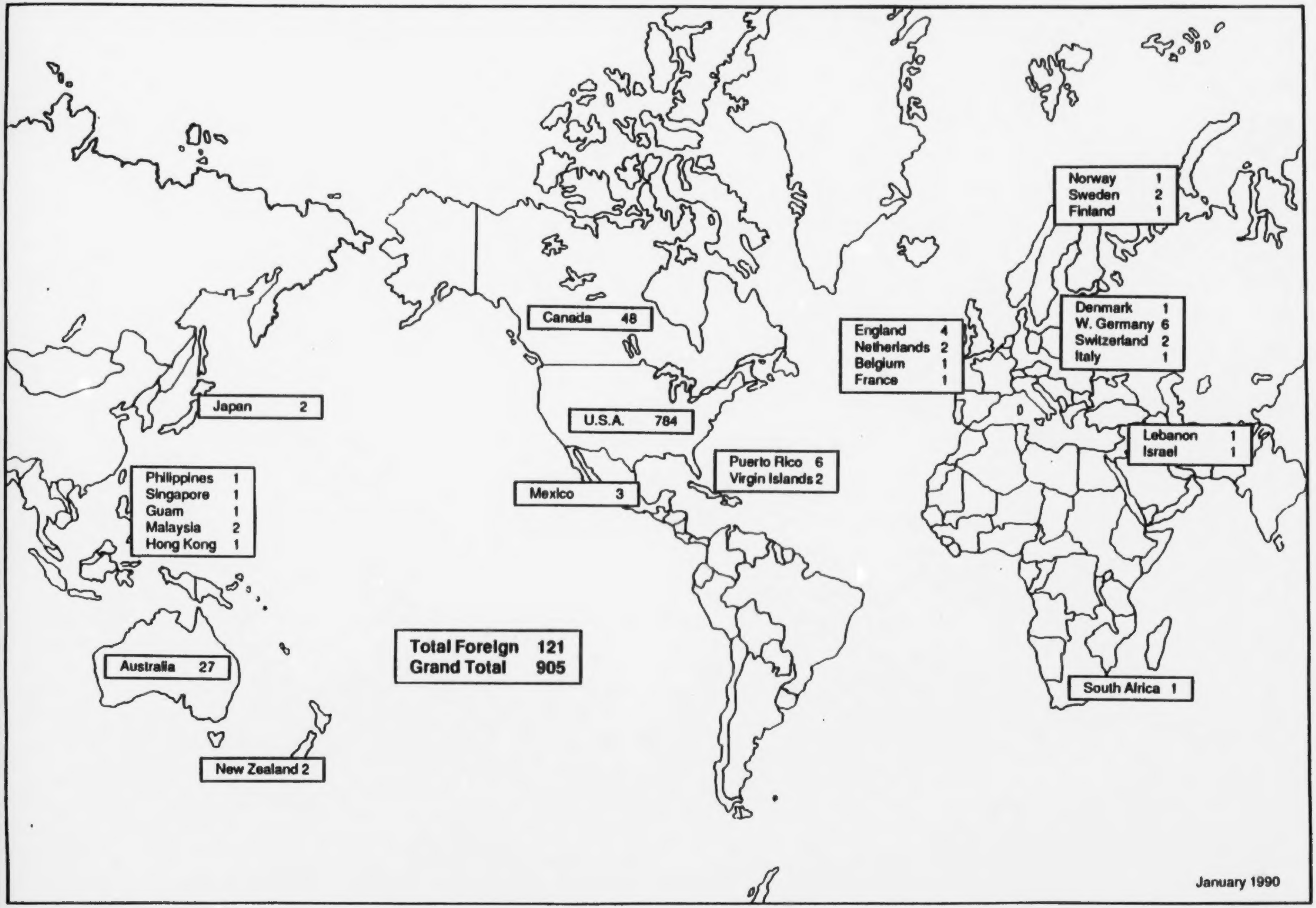

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ERIC® USERS' INTERCHANGE

March 1991

ERIC SYSTEM DEVELOPMENTS

In order to offer unequalled access to education information worldwide, the ERIC System constantly seeks to improve its products and services. Please assist us in our efforts by completing the brief survey included at the end of this issue.

Several exciting changes have occurred within the ERIC System since the last issue of *Interchange*. The most recent change is the announcement last month by the U.S. Department of Education of a new operating agency for the ERIC Document Reproduction Service (EDRS).

New Contract Awarded To Operate the ERIC Document Reproduction Service

Effective February 1991, the U.S. Department of Education awarded a new contract to operate the ERIC Document Reproduction Service to Cincinnati Bell Information Systems (CBIS) Federal. The new contract, which was the result of a national competition, is for a five-year period.

CBIS offers new and improved services and products, faster delivery times, and a plan for the development of new document delivery systems. ERIC microfiche and document prices will increase slightly to support the development of these new products and services. (See EDRS Price List Attachment)

By this time all ERIC Standing Order Customers should have received information about the new EDRS contractor. If you have any questions about the status of your account, or if you have any other questions, call EDRS at 1-800-443-ERIC.

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Reader Survey
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New EDRS Price List

The new address for EDRS is:

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Cincinnati Bell Information Systems (CBIS) Federal
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FAX: 703/440-1408

The ERIC Users' Interchange was prepared by ACCESS ERIC, a project of Aspen Systems Corporation under contract #RI890120 for the Office of Educational Research and Improvement, U.S. Department of Education. Contractors undertaking such projects under Government sponsorship are encouraged to express their judgment in professional and technical matters. Points of view or opinions do not necessarily represent official Department of Education positions or policies. All questions, correspondence, and contributions should be directed to the Editor of the Interchange, ACCESS ERIC, 1600 Research Blvd., Rockville, MD 20850; 1-800-USE-ERIC.

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Among other recent developments in the ERIC System is the selection by the U.S. Department of Education of several locations nationwide to conduct field tests of its new products, *Compact ERIC* and the *ERIC Schooldisc*.

ERIC Schooldisc/Compact ERIC Test Sites Chosen

The following locations have been chosen by the Office of Educational Research and Improvement (OERI) as test sites for prototypes of *Compact ERIC* and the *ERIC Schooldisc*:

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- Columbia University, Teachers College/
  Central Park East High School
  New York, NY
- Central High School
  Victoria, VA
- University of California
  Education/Psychology Library
  Berkeley, CA
- University of South Florida
  Tampa, FL
- Prince George's County Public Schools
  Teacher Resource Center
  Upper Marlboro, MD
- University of Michigan
  Ann Arbor, MI
- U.S. Department of Education
  Office of Educational Research and Improvement
  Education Research Library
  Washington, DC

The sites chosen will serve as test centers for two months beginning March 1, except for the locations in New York, which will share equipment and materials.

The ERIC System constantly strives to reach new audiences and increase its availability to users. As part of this process, ACCESS ERIC has included the four ERIC reference and referral databases on the GTE network. These databases are available on a subscription basis to anyone with a PC and a modem. If you already subscribe to GTE ES, you have immediate access to them.

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- Education-Related Information Centers--organizations that provide information relevant to education, including subjects covered, intended audiences, and contact person.
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- ERIC Digests Online--full-text syntheses of recent research findings on current trends and issues in education prepared by the ERIC Clearinghouses and intended for busy practitioners, administrators, and policymakers.

If you do not have a subscription to GTE ES and would like further information, call ACCESS ERIC at 1-800-USE-ERIC.

Interchange readers will appreciate a recent modification to Current Index to Journals in Education and Resources in Education that will make it easier for them to search the ERIC database.

ERIC Abstract Journals To Include ISSN Numbers

ERIC has begun to include the International Standard Serial Number (ISSN) in CIJE and RIE citations. The ISSN uniquely identifies individual journal titles and permits searchers of the ERIC database to restrict their searches to a particular journal or set of journals without having to enter long or complex titles. Beginning in January 1991, the ISSN appears in CIJE and RIE in the Report Number field for all journal articles and journal issues. (For example, in DIALOG: RN=ISSN-0123-4567).

SPECIAL INTEREST NEWS FOR INTERCHANGE READERS

Wondering whether to order a copy of the Directory of ERIC Information Service Providers? Readers who already have their copies may benefit from the suggestions of a fellow ERIC user. Those who do not yet have one can order their free Directory by calling ACCESS ERIC at 1-800-USE-ERIC.

Using the Directory of ERIC Information Service Providers

This free directory provides unique information about more than 900 organizations and institutions that offer access to the ERIC database, either on CD-ROM, online, or in hard copy. Consider the benefits of this resource, particularly to librarians.

Some users, especially those in rural areas or small communities, must travel long distances to obtain access to the ERIC database when doing research or writing papers. Because so many facilities offer this access, users may be overlooking closer sites that can meet their information needs as completely as the site they usually use, without the long-distance driving. Using the Directory, librarians can quickly and easily identify more convenient locations to access the database, thus better meeting their users' needs. Users will be grateful, and library staff will find the enthusiasm rewarding.

The Directory is also useful for practitioners who have relocated to new geographic areas. At their fingertips is a list of resources that will save them time and energy in finding the most appropriate method to retrieve the information they seek. In addition to listing sites and services, the Directory includes audiences served, availability of microfiche reader/printers, access procedures, and hours of operation.

The Directory can be invaluable to smaller libraries not fortunate enough to maintain ERIC collections. It encourages fast, accurate referrals to appropriate service providers that do have access to the ERIC database.

Are you interested in simplifying your ERIC search? Have you conducted a successful search in the past and want to repeat or update it? The ERIC Clearinghouse on Higher Education has developed a new service that can help.

New Search Aids Available From ERIC/HE

In response to requests for information on how to structure a successful computer search, the ERIC Clearinghouse on Higher Education has developed a new product called the Search Aid. When individuals or organizations find that an ERIC search retrieves precisely what they are looking for, they frequently want to know how to duplicate or update that search if necessary. The Search Aid was originally developed as a step-by-step visual illustration of the process that was used to bring the user relevant documents from the ERIC database. Subsequently, the ERIC/HE Search Aid has been used as a training tool both in formal workshops and onsite. Since the overriding goal of the ERIC/HE User Services component is to empower the end user, training tools such as the Search Aid have become a major focus.

For more information on specific Search Aids, contact the ERIC Clearinghouse on Higher Education, George Washington University, One Dupont Circle, NW, Suite 630, Washington, DC 20036-1183, 202/296-2597.

ERIC National Technical Steering Committee Update

The ERIC National Technical Steering Committee was formed in 1976 to enable the technical personnel of the Clearinghouses to handle systemwide concerns and make formal recommendations to Central ERIC. The Committee, which has 5 members and a chair, strives to improve the ERIC System by streamlining internal database processing, developing a more complete *Thesaurus*, serving database users more effectively, and identifying technical issues that affect online searching.

The Committee welcomes suggestions from the library and information science community and educational professionals. If you have suggestions for improving ERIC products or services and would like to contribute your ideas, please submit them in writing to Jane Henson, Chair, ERIC National Technical Steering Committee, ERIC/SO, Indiana University, Social Studies Development Center, 2805 East 10th Street, Suite 120, Bloomington, IN 47408-2373.

Call 1-800-USE-ERIC

1966-1991

ERIC

The National Education Information Network

Over the years the ERIC System has evolved to meet the changing needs of the education community. This year marks the System's 25th anniversary. To commemorate this important milestone, the *Interchange* offers a look at ERIC's distinguished past.

ERIC Celebrates 25th Anniversary

The ERIC System and the Department of Education are planning special publications and events to express appreciation to the many individuals who have supported ERIC through the years. You are invited to join in celebrating this special year for ERIC. Details will be announced in the next issue of the *Interchange*.

ERIC was created in response to recommendations from research studies that called for an information archival and retrieval system for the education field. The first 12 ERIC Clearinghouses were established in June 1966. In the same year, the ERIC Processing and Reference Facility began operations as an organizing component for the decentralized network of specialized Clearinghouses.

In 1967 the Educational *Research* Information Center became the Educational *Resources* Information Center. The name change was due to users' comments that the ERIC database not only contained research reports, but valuable resource tools to help teachers and administrators, as well as researchers.

The guiding principles of the Clearinghouses still closely reflect their original mission: to collect quality educational materials for the database; to develop and disseminate these materials in defined subject areas; and to create a standard thesaurus to index the materials.

Systemwide Expansion In The 60's

The System expanded rapidly during the 1960's. The ERIC Document Reproduction Service was established in 1965 to provide permanent access to materials that the Clearinghouses would collect and produce. Six additional Clearinghouses were funded in 1966, and over the years they have merged or been replaced and renamed, resulting in the current 16 centers. The first "Adjunct" Clearinghouse was created in 1989, and three more have been added since then. Adjuncts receive separate, outside funding and provide comprehensive coverage of highly-focused areas such as adult literacy and art education.

ERIC in Hard Copy and CD-ROM

The first edition of Resources in Education (RIE, originally called Research in Education) was published in November 1966. In 1969, ERIC expanded to cover education journal literature as well as document literature, and published the first issue of Current Index to Journals in Education (CIJE).

Through the 1960's, access to the ERIC database was limited to the print indexes RIE and CIJE. In 1971, ERIC went "online". In 1986, with the advent of optical storage technology, ERIC became one of the first databases issued on CD-ROM. Since then, ERIC on CD-ROM (now offered by three vendors) has become one of the most popular databases worldwide.

New Component Added After 20 Years

The ERIC Redesign project began in 1986, and in 1989 ACCESS ERIC became the first addition to the System in 20 years, providing outreach and dissemination for the entire System and offering users reference and referral services through a toll-free number.

Looking Ahead

As ERIC begins its next 25 years of service to the education community it is developing new products and services, including full-text access to materials on CD-ROM. Last year the database was accessed online from 90 countries and its document collections were available in 27 countries. The database has grown to more than 700,000 documents and journal articles, adding 30,000 every year. With your help and support, ERIC will continue to influence education worldwide for years to come. Join us in saluting ERIC in 1991.

Call 1-800-USE-ERIC

Ask ERIC

Letters to the Editor

Are you puzzled about the ERIC System? Confused about the database? Take your questions straight to the source. Ask ERIC! Address your questions to Editor of the *Interchange*, c/o ACCESS ERIC, 1600 Research Blvd., Rockville, MD 20850.

Q *"At-risk" persons is a hot topic in education, but if you search the ERIC database using this term you may not get all the information available. To make sure ERIC users have access to all the appropriate materials in the database, we asked Jim Houston, lexicographer at the ERIC Processing and Reference Facility, to explain a more efficient way to search the database.*

A In the ERIC *Thesaurus*, the term "At-Risk Persons" is defined as "individuals or groups identified as possibly having or potentially developing a problem (physical, mental, educational, etc.) requiring further evaluation and/or intervention". (Note: if possible, use the more specific term "high risk students")

The term is defined broadly, to encompass a wide variety of possible "risks". If the concept you are after is restricted to the narrower "academically at risk students," you should search using the descriptor "High Risk Students." In the ERIC *Thesaurus*, the term "High Risk Students" is defined as "students with normal intelligence, whose academic background or prior performance may cause them to be perceived as candidates for future academic failure or early withdrawal". (Note: prior to March 1980, this concept was occasionally indexed under "educationally disadvantaged")

"High Risk Students" was added to the *Thesaurus* in March 1980 and has more than 900 usages in RIE and more than 400 usages in CIJE. Searching on this term as a "major" index term is the best way to retrieve items of high relevance to your topic of interest.

Q *Marty Hooker, Reference Librarian at the University of Maryland, College Park, wants to know which staff members to refer users to when they call the ERIC Clearinghouses.*

A Each Clearinghouse has a staff user service librarian who can answer questions about the documents that Clearinghouse has entered and abstracted in the ERIC database. These staff members, listed below by Clearinghouse, are trained to help callers with a variety of questions. They are an excellent source of information.

ACCESS ERIC	B. Taheri
ERIC Facility	G. Mathews
EDRS	L. Douds
ERIC/CE	J. Wagner
ERIC/CG	B. Karvonen
ERIC/CS	G. Londergan
ERIC/EA	M. Finne
ERIC/EC	V. Levitas
ERIC/FL	C. Packard
ERIC/HE	J. Burt
ERIC/IR	N. Preston
ERIC/JC	S. Forbes
ERIC/PS	N. Howard
ERIC/RC	B. Lanham
ERIC/SE	P. Blosser
ERIC/SO	V. Schlene
ERIC/SP	D. Stewart
ERIC/TM	L. Davey
ERIC/UD	P. Cuasay
ADJ/AR	K. Maher
ADJ/JS	Y. Oguzertem
ADJ/LE	D. Spener

Call 1-800-USE-ERIC

NEW ERIC PUBLICATIONS, PRODUCTS AND SERVICES

The ERIC Clearinghouses and Support Components regularly produce new products and publications that guide users through the ERIC System or treat specific education issues. The *Interchange* is pleased to announce the following new items:

New from ACCESS ERIC

- 1991 ERIC Calendar of Education-Related Conferences
  $15.00, prepaid.
  Includes information on a wide variety of international, national, State, regional, and local education-related conferences. Designed to help practitioners stay abreast of events scheduled for the next 12 months. Features five indexes that allow users to identify conferences of interest quickly and easily:

  --Conference Name Index
  --Date Index
  --Geographic Location Index
  --Sponsor Index
  --Subject Index

- Catalog of ERIC Clearinghouse Publications
  $8.00, prepaid.
  Offers a complete listing of titles currently available from the ERIC System. (Many of these titles are available free.) Includes ordering information and a comprehensive subject index indicating which Clearinghouse publishes each title.

- The ERIC Review
  Provides education practitioners with education research and news they can use. Published three times a year and designed to help the education community stay informed of recent research findings and critical trends and issues in education. Announces important System developments and new products and services.

  The next issue focuses on parental involvement and will be available in April. For a free subscription, call ACCESS ERIC at 1-800-USE-ERIC.

- The 1991 ERIC Directory of Information Centers
  $15.00, prepaid.
  Lists 300 education-related organizations that provide such services as information syntheses and dissemination, online searches, outreach, technical assistance, and reference and referral. Allows users to quickly and easily identify resources by subject, organization name, and geographic location. Lists each organization's services as well as subjects covered, intended audiences, and contact person.

These publications are available from ACCESS ERIC, 1600 Research Boulevard, Rockville, MD 20850, 800/USE-ERIC. Check, money order, Visa or MasterCard accepted. Purchase orders accepted from universities and State and local agencies only.

New from the ERIC Clearinghouse on Adult, Career, and Vocational Education

- "ERIC for Adult Educators"
  $9.50.
  Describes how adult educators can use the ERIC System. Includes information on the types of adult education materials in ERIC, submitting materials for inclusion in ERIC, searching the database, and accessing ERIC Clearinghouse services.

  The 60-minute audiotape is available from Center Publications, ERIC Clearinghouse on Adult, Career, and Vocational Education, Ohio State University, Center on Education and Training for Employment, 1900 Kenny Road, Columbus, OH 43210-1090, 614/292-4353.

New from the ERIC Clearinghouse on Handicapped and Gifted Children

- ERIC/EC provides callers with custom searches of the ERIC database as well as other databases such as Exceptional Child Education Resources (ECER) and PsycINFO, for a base cost of $20.00, which includes 20 minutes of staff time and 10 free abstracts. Searches requiring additional time are billed at $1.00 per additional minute and abstracts are billed at $.30 per additional abstract. Special processing and handling require additional fees. For more information, call the ERIC Clearinghouse on Handicapped and Gifted Children at 703/264-9474.

- Adaptive Behavior
  Research and Resources on Special Education
  Number 26; $1.00, prepaid.
  Describes a theoretical model designed to clarify the nature and structure of adaptive behavior and to address methodological issues in its assessment. Based on studies described in Assessing and Developing the Adaptive Functioning of Handicapped Children and Youth by Robert Bruininks.

- Computer-Assisted Instruction for Students With Mild Handicaps
  Research and Resources on Special Education
  Number 27; $1.00, prepaid.
  Describes a series of studies that applied instructional design principles to computer-assisted instruction and looked at how they can best be used at various stages of instruction for students with mild handicaps.

- Student Self-Management To Increase On-Task Behavior
  Research Brief for Teachers
  Brief T3; $1.00, prepaid.
  Reports on a strategy that teachers can employ in their classrooms to increase student self-management, Includes a bibliography of additional resources on student self-management techniques.

These research summaries have been developed through a joint project of ERIC/EC and the Office of Special Education Programs (OSEP) and are available from the ERIC/OSEP Special Project, The Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091, 703/620-3660.

New from the ERIC Clearinghouse on Higher Education

- ERIC FullSearch
  Includes online search prepared by ERIC staff with offline prints. Available for $40.00, prepaid, which includes up to 100 citations from the ERIC database, plus $.15 per citation over 100.

- ERIC QuickSearch
  Includes CD-ROM search prepared by staff, with or without abstracts. Available for $20.00, prepaid, plus $.15 per page printed and/or $2.00 per floppy disk of downloaded citations.

- ERIC UserSearch
  Includes CD-ROM search prepared by user. Available for $5.00 plus $.15 per page printed and/or $2.00 per floppy disk of downloaded citations.

These search services are available through the ERIC Clearinghouse on Higher Education, The George Washington University, One Dupont Circle, Suite 630, Washington, DC 20036, 202/296-2597.

New from the ERIC Clearinghouse on Information Resources

- End-User Searching: A Selection of the Literature for 1983-1988
  Geraldene Walker
  IR-80; $5.50 including shipping and handling.
  Traces the development of online search systems and services designed for use by information seekers, rather than professional searchers. Includes sections on end-user systems, gateways and CD-ROM databases, research on end-user searching, training, and performance, and future developments, includes an extensive bibliography.

- Information Skills for an Information Society: A Review of the Research
  Carol Collier Kuhlthau
  IR-74; $6.50 including shipping and handling.
  Defines information literacy and explains its relationship to library and computer literacy. Covers topics such as characteristics of information literacy, the library media center as information center, integrating information skills with the curriculum, information technologies in schools, and means of achieving information literacy. Includes an extensive list of references.

- Online Information Services for Secondary School Students: A Current Assessment
  Elizabeth Smith Aversa, Jacqueline C. Mancall, and Diane Oesau
  IR-75; $8.00, including shipping and handling.
  Leads readers through current literature on the impact of online access on information services and instruction for students. Reports the findings of a survey conducted in junior high schools in 1986. Provides a location guide to materials for additional information. Includes a copy of the survey questionnaires and a list of vendor contacts for school library media specialists.

Call 1-800-USE-ERIC

These publications are available from the ERIC Clearinghouse on Information Resources, 030 Huntington Hall, Syracuse University, Syracuse, NY 13244-2340, 315/443-3640.

New from the ERIC Clearinghouse on Junior Colleges

- ERIC/JC recently sponsored a workshop in which Los Angeles area libraries shared brochures on Bibliographic Instruction, including tips for searching the ERIC database using CD-ROM, as well as hints for general searching. The brochures can be easily adapted for any library and are provided by the UCLA Library system, UCLA Educational/ Psychology Library, California State University, Fullerton Library, and Chapman College Library.

  For free copies of these brochures, contact the ERIC Clearinghouse on Junior Colleges, University of California at Los Angeles, 8118 Math-Sciences Building, Los Angeles, CA 90024, 213/825-3931.

New from the ERIC Clearinghouse on Reading and Communication Skills

- Adult Literacy: Contexts & Challenges
  Anabel Powell Newman and Caroline Beverstock
  Order Number G12; $9.95.
  Documents the history and development of the adult literacy movement. Defines literacy and suggests a means by which to measure it historically and in the present. Surveys the emergence of literacy activism and scholarly thinking about literacy. Reports on the current special efforts of the National Coalition for Literacy, and discusses the future challenges of the adult literacy movement.

- Peer Teaching and Collaborative Learning in the Language Arts
  Elizabeth McAllister
  Order Number G13; $9.95.
  Defines peer teaching/peer tutoring. Gives a brief history of the method and combines it with a discussion of the theory and economics of cooperative learning. Describes four ways of organizing a peer program. Offers suggestions on how to train tutors and design tutoring lessons. Explains how to evaluate programs. Reviews research on peer tutoring, and includes a bibliography, sample evaluation and accomplishment forms.

- Teaching the Introductory Public Relations Course: A Communication Perspective
  James S. Measell
  Order Number G11; $8.95.
  Discusses applied communication theory and research, relating it directly to PR education and practice. Outlines a full semester of coursework with detailed assignments for students. Recommends textbooks and sets up a reading schedule for students. Offers extensive bibliographic information including PR associations, periodical publications, and key figures in the field.

- Learning Packages: For In-Service Workshops or Independent Study
  Includes an overview of the package topic, several recent documents, an extensive bibliography of additional resources, and guidelines for applying the ideas presented in the classroom; 50 learning packages are available for $14.00 each on a wide range of topics.

These publications are available from the ERIC Clearinghouse on Reading and Communication Skills, Indiana University, Smith Research Center, Suite 150, 2805 East 10th Street, Bloomington, IN 47408-2698, 812/855-5847.

New from the ERIC Clearinghouse on Rural Education and Small Schools

- Directory of Organizations and Programs in Rural Education
  $6.50, postpaid.
  Lists hundreds of organizations and programs related to rural education and to the concerns of rural educators. Co-published by the National Rural Education Association.

- Got the Education Beat? Use ERIC!
  $3.50, postpaid.
  Provides handbook information for freelance journalists and those on the staffs of newspapers, magazines, and broadcast media.

These publications are available from the ERIC Clearinghouse on Rural Education and Small Schools, Appalachia Educational Laboratory, 1031 Quarrier Street, P.O. Box 1348, Charleston, WV 25325-1348, 800/344-6646 (In WV), 800/624-9120 (Outside WV).

New from the ERIC Clearinghouse on Social Studies/Social Science Education

- Guide to Resources in Law-Related Education
  Robert S. Leming and Lucinda J. Peach
  $7.00, including shipping and handling.
  Includes an essay defining law-related education and describing its place in the curriculum. Provides an annotated list of materials and resources for teachers and curriculum specialists in law-related education. Published in association with the Indiana State Bar Association.

- Geography Education for Citizenship
  Joseph P. Stoltman
  $12.00, including shipping and handling.
  Encourages the teaching of geography as an essential part of education for democratic citizenship. Surveys literature on teaching and learning and curriculum guides of the 50 state-level departments of education to portray the current status of geography in the curricula of elementary and secondary schools. Published in association with the Social Science Education Consortium.

- Citizenship for the 21st Century
  William T. Callahan, Jr. and Ronald A. Banaszak, editors
  $14.00, including shipping and handling.
  Examines current ideas and issues in education for democratic citizenship in the United States. Includes chapters by such scholars and civic educators as R. Freeman Butts, Judith Torney-Purta, F. Chris Garcia, Mary Jane Turner, Stuart Langton, Curtis Gans, and Richard Merriman. Published in association with the Foundation for Teaching Economics and the Constitutional Rights Foundation.

A 10% discount is available on orders of 10-20 copies for each of these publications. Orders for more than 20 copies will be sold at a 20% discount.

These publications are available from the ERIC Clearinghouse on Social Studies/Social Science Education, Indiana University, Social Studies Development Center, 2805 East 10th Street, Suite 120, Bloomington, IN 47408-2373, 812/855-3838.

New from the ERIC Clearinghouse on Urban Education

- Contextual Factors in Education: Improving Science and Mathematics Education for Minorities and Women
  Michael Cole and Peg Griffin, editors
  Urban Diversity Series #96; free.
  Reviews research on the various ways children learn and how these differences can affect achievement in the traditional classroom.

  This publication is available from the ERIC Clearinghouse on Urban Education, Teachers College, Columbia University, Institute for Urban and Minority Education, Room 300, Main Hall, Box 40, 525 West 120th Street, New York, NY 10027-9998, 212/678-3433.

The following Attachments have been included for your information and convenience:

- *ERIC Users' Interchange* Reader Survey
- ERIC Digest on The National Research and Education Network (NREN), from the ERIC Clearinghouse on Information Resources
- Updated Price List from the ERIC Document Reproduction Service (EDRS)

The *ERIC Users' Interchange* is published twice a year by ACCESS ERIC.

Editor . . . . Terri Bourbon

Special thanks to Jane Henson, Marty Hooker, Jim Houston, Nancy Krekeler, and Nancy O'Brien for their contributions to this issue.

Look for the next issue in September 1991.

ERIC Users' Interchange Reader Survey

What are your impressions of ERIC? Your opinion is a vital part of the ERIC System's ongoing efforts to improve its products and services. Please help us continue to serve your information needs by completing this brief survey and mailing it back to:

Editor of the *Interchange*
ACCESS ERIC
1600 Research Blvd.
Rockville, MD 20850.

1. Please check the most popular ERIC medium for your:

your:	Users	Staff
print products	☐	☐
online	☐	☐
CD-ROM	☐	☐

2. What other kinds of products do you think ERIC should develop?

3. Do you keep statistics on the frequency of use of ERIC products?

   ☐ Yes ☐ No

   If yes, would you share your statistics witn the ERIC Staff? (Please provide your name, address, and phone number below.)

4. What new training materials would you recommend that ERIC develop to help you explain the ERIC System?

5. Are you interested in receiving ERIC documents on storage/retrieval mediums other than microfiche?

   ☐ Yes ☐ No

   If yes, which ones?

6. What information or topics would you like to see included in future issues of the *Interchange*? (Please be specific)

Thank you for your cooperation.

Call 1-800-USE-ERIC

ERIC

ERIC Clearinghouse on Information Resources

Syracuse University
School of Education • School of Information Studies
030 Huntington Hall
Syracuse, New York 13244-2340
(315) 443-3640

ERIC DIGEST

November 1990

EDO-IR-90-4

The National Research and Education Network (NREN): Promise of a New Information Environment

by Ann P. Bishop

This digest describes proposed legislation for the implementation of the National Research and Education Network. Issues and implications for teachers, students, researchers, and librarians are suggested and the emergence of the electronic network as a general communication and research tool is described.

NREN Legislation

Senator Albert Gore introduced the National High Performance Computing Act of 1990 (S.1067) in order to create a national network of "information superhighways" designed to transmit billions of bits of data per second. The network would allow researchers, businesspeople, educators, and students around the country to communicate with each other and to access a broad range of research tools and information resources. Although Gore's bill did not pass by the time the 101st Congress adjourned in October 1990, it will most likely be reintroduced in January 1991. If the next version of the bill resembles its predecessors, we can expect that it will seek to accomplish some or all of the following objectives:

- Establish a Federal High Performance Computing Program in which science agencies and national libraries will fund and conduct research, and develop technologies and resources, appropriate for the NREN.
- Mandate the creation of the NREN--to link over 1,000 Federal and industrial laboratories, educational institutions, libraries, and other facilities--over the next five years.
- Promote the development of a number of electronic information resources and services on the NREN, such as directories of users and databases, electronic journals and books, access to computerized research facilities, tools, and databases, access to commercial information resources and services, and user support and training.
- Fund the development of supercomputers and advanced software to help resolve certain "grand challenges" in science and engineering.

The proposed legislation complements ongoing Executive branch activities. The main goals of these Federal initiatives are to help the U.S. to maintain its leading edge in high-performance computing and to improve national productivity. Continued research and development in high-performance computing and networking is seen as critical to the country's competitiveness, security, scientific and technological advancement, and, ultimately, to the welfare of its citizens. Although it is clear that the emphasis of the bill is on advanced computing and elite users, it nonetheless has the potential to create widespread changes in today's information environment.

A Changing Information Environment

Since the late 1960s, uses and audiences for electronic communication and computing have grown slowly but steadily in the research, education, and library communities. The Defense Advanced Research Projects Research Agency (DARPA) of the Department of Defense funded the development of the first successful prototype packet-switching network, known as ARPANET, in 1969. This network was used to connect organizations involved in government-sponsored research in computing and networking. ARPANET served both as an object of study and as a means to facilitate research communication and computing.

In 1984, NSF began establishing national supercomputer centers and designing a high-speed telecommunications backbone, known as NSFNET, to provide access to those centers for scientists and engineers in a variety of disciplines. Institutions can link their local networks to NSFNET through state or regional networks. These mid-level networks are independently operated and charge fees for connections and use. NSFNET is currently the nation's largest general purpose research network and serves as the backbone of the Internet, a collection of networks that use the communications protocol developed for ARPANET, called TCP/IP, for coding and transmitting electronic information. The Internet is currently comprised of over 400 interconnected national, regional, and institutional networks and is probably serving over a million users around the world. Further, gateways exist between the Internet and a variety of other networks.

Perhaps the most important of these is BITNET, a cooperative network founded in 1981 that is widely used in research and education today. BITNET differs from the Internet in several ways: it is not sponsored by the government, is not open to commercial enterprises, aims to serve scholars as well as scientists and engineers, and generally supports only electronic mail and file transfer. BITNET merged its organization with CSNET, a network used by computer science researchers, and became the Corporation for Research and Education Networking (CREN) in 1989. It currently connects over 1,300 sites around the world.

Network resources and services have expanded greatly in the 1980s, along with familiarity with the technology. Networking is gradually becoming a more familiar tool in the classroom, laboratory, office, and library. Current available services include:

- Electronic mail for exchanging messages
- File transfer for transmitting papers and data
- Online bulletin boards for posting queries and participating in discussions

- Online newsletters and journals for sharing news and research results.

These services make it easier to provide instruction to remote learners, collaborate with geographically-dispersed colleagues, and tap the expertise of a wide range of contacts.

Networks also currently provide online access to a variety of resources and tools, such as:

- Library catalogs and databases
- Commercial, governmental, and not-for-profit information services (e.g., Dialog, OCLC)
- Supercomputers
- Specialized software
- Specialized research instruments (e.g., telescopes), applications (e.g., medial imaging), and databases (e.g., satellite data).

These network services and resources facilitate both traditional and innovative education and research activities. They offer individuals at small or geographically remote institutions a "lifeline" to their colleagues and an opportunity to perform cutting-edge research. The NREN would, hopefully, encourage the further development of electronic services and resources. In addition, the NREN would make them available to an even broader audience, and its speed and capacity would exceed those of existing networks.

Issues in National Networking

Government and industry are working to solve technical problems such as increasing speed, capacity, connectivity, reliability, and interfaces of electronic networks. Political and economic problems are also receiving increased attention. But a number of other important issues will need to be resolved before national networking can reach its full potential. Problems include:

- Determining costs and establishing fees
- Guaranteeing universal access
- Providing adequate user support and training
- Determination of network use and management policies
- Overcoming organizational resistance to networking
- Providing directories and maintaining quality control of information resources
- Fitting network services to research and education norms for formal and informal communication.

These problems will be extremely difficult to resolve because a national network will connect a variety of institutions with differing goals, norms of behavior, and needs and because the network will still consist of a collection of smaller, independent networks. The library and education communities have expertise to lend in these areas, but they need to make both their expertise and their views better known to policy makers.

Emergence of New Initiatives

The gradual emergence of national networking has spawned a number of new initiatives for network research, services, and advocacy. The Corporation for National Research Initiatives, with a $15.8 million grant from NSF, is overseeing hardware and software experimentation that will be carried out by a number of corporate, academic, and government institutions. NSF is also sponsoring research on the development of a national "Collaboratory," a collection of electronic research resources that would promote and facilitate collaboration on a national scale. Reference Point, primarily a service organization, hopes to assist the volunteer sector in the development and use of new technologies for accessing, exchanging, and disseminating information. An important new advocacy group is the Coalition for Networked Information (CNI), whose members are academic and corporate information and computing professionals. CNI aims to promote the provision of electronic information services, and is particularly concerned with linking libraries to the network. The Electronic Frontier Foundation has been established to address the impact of electronic communication on society. It will foster public education on social and legal issues and support litigation to protect First Amendment rights in an electronic environment.

What these initiatives share is the desire to shape the future of national networking in such a way that its benefits are made available to a broad spectrum of users. Librarians and educators, in particular, can get involved in such initiatives to assure that the needs and perspectives of their constituencies receive adequate attention from national policy makers and network developers.

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ERIC Revised February 1991

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ERIC® USERS' INTERCHANGE

September 1991

SPECIAL INTEREST NEWS FOR *INTERCHANGE* READERS

NEW Guides to Searching ERIC on CD-ROM

Using ERIC on CD/ROM and ***Searching the ERIC Database using CD-ROM*** are two new search guides to assist users in mastering the intricacies of searching ERIC on CD-ROM.

- ***Using ERIC on CD/ROM*** was written by two University of Tennessee professors. It provides a basic introduction to searching the ERIC database with the SilverPlatter system. However, it is not applicable to DIALOG's OnDisc system. Free copies are available from ERIC/JC. See the "ERIC Clearinghouse" attachment for address information.
- ***Searching the ERIC Database Using CD-ROM*** is produced by Telluric Research in Canada. It offers a more comprehensive introduction to searching, and provides tools for using both DIALOG and SilverPlatter. The cost is $6 plus $2 postage and handling. It is available from Telluric Research, 107-237 Locke Street South, Hamilton, Ontario, Canada L8P 4T4, 416/572-7266.

Caring for ERIC Microfiche

The handling and care of silver and diazo ERIC microfiche depends on how it will be used. Some ERIC microfiche are for storage only, while others are for regular use. Both types have unique storage and handling criteria.

One example of microfiche intended only for storage is the ERIC camera masters used by the ERIC Document Reproduction Service (EDRS) to create the intermediate print masters. These print masters are used by EDRS exclusively for the duplication of silver and diazo copies distributed to ERIC microfiche subscribers. The camera masters are packaged and stored in a temperature- and humidity-controlled environment. The camera masters are long-term archival records that will provide usable images for at least 100 years if stored properly.

See MICROFICHE, p. 2

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Attachments

ERIC/IR Digest
"ERIC Clearinghouses and Other Network Components" Information Sheet
ERIC *Users' Interchange* Response Form

The *ERIC Users' Interchange* was prepared by ACCESS ERIC, a project of Aspen Systems Corporation under contract #RI890120 for the Office of Educational Research and Improvement, U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express their judgment in professional and technical matters. Points of view or opinions do not necessarily represent official Department of Education positions or policies. All questions, correspondence, and contributions should be directed to the Editor of the *Interchange*, ACCESS ERIC, 1600 Research Blvd., Rockville, MD 20850-3166, 1-800-USE-ERIC.

MICROFICHE, from p. 1

The diazo and silver ERIC microfiche are examples of working microfiche. These working microfiche were never intended to be archival, and will require replacement eventually. However, there are care and handling measures that can be employed to increase their life.

Most problems encountered with handling working microfiche are cosmetic in nature and can be corrected and prevented with a little housekeeping. Included are fingerprints, scratches not interfering with text, and edge fog and other fogs which do not affect images.

Fingerprints can be removed from film by using a lint-free cloth and a film cleaner, which can be purchased from a photographic store or supply house. Scratching can be prevented by keeping the microfiche viewing equipment clean. Glass platens and any other surfaces coming into contact with the film should be cleaned regularly in order to remove dust and dirt which can cause cosmetic and information-destroying scratching.

Working microfiche are stored in numerous devices, from cabinets to trays. Silver distribution microfiche should be stored in envelopes to prevent "cinching," the scratching that occurs when layers of film slide against each other. Silver film has a soft emulsion and is prone to scratches. Since silver film is expensive, every precaution should be taken when handling and storing it.

Diazo film is less expensive and less susceptible to scratches caused by cinching because the emulsion is harder. For this reason, it does not need to be stored in envelopes.

If you have additional questions about storage of ERIC microfiche, please call the ERIC Document Reproduction Service at 1-800-443-ERIC (3742).

Some Journal Titles Difficult to Search on SilverPlatter

Users who search the SilverPlatter CD-ROM products will experience some problems when searching journal names containing certain special characters. The following journal names are examples which illustrate the problems discovered thus far:

1. *Simulation/Games for Learning*
   The SilverPlatter program treats this title as two journal names, even though it is one. The program reacts to a slash by splitting the single name into two.

2. *Community & Junior College Libraries*
   The ampersand gets converted into two consecutive hyphens and must be searched with these hyphens in order to get a hit.

3. *Communication: Journalism Education Today (C:JET)*
   The program inserts a hyphen in place of the left parenthesis, and everything to the right of the parenthesis is deleted.

4. *Harvard Civil Rights—Civil Liberties Law Journal*
   The dash has been entered in a number of ways: as a single hyphen, double hyphen, with and without blanks surrounding the hyphens, etc. When the program meets with double hyphens or a single hyphen surrounded by blanks, it doesn't index the name at all.

Users searching titles like these in the Journal Citation field will retrieve zero hits. This deceives users into thinking the journal was not indexed, when in fact it was. The problem can be alleviated by using the "Index" mode of searching rather than the "Find" mode. The "Index" mode allows users to see how the journal titles have been indexed, and to select the proper name forms for their searches.

For more information about this journal title searching problem, contact SilverPlatter at 1-800-343-0064.

Prices Increase for *Resources in Education*

Prices for subscriptions and single copies of *Resources in Education*, the monthly abstract journal covering the document literature in ERIC, have been changed. Now subscriptions are $94 domestic and $117.50 foreign; single copies are $17 domestic and $21.25 foreign.

For more information or to order *RIE*, contact the U.S. Government Printing Office at 202/783-3238. For mail orders, send check or money order made payable to "Superintendent of Documents," to: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-9371

ERIC 25th Anniversary Celebration!!

PICTURED (left to right): Milt Goldberg, Director of the Office of Research, OERI; Kathleen Hunter of the National Trust; Andrew Gulliford, Director of Public History and Historic Preservation Program at Middle Tennessee State University; Robert Stonehill, Director of the ERIC Program; and J. Jackson Walter, President of the National Trust for Historic Preservation.

Twenty-five years ago, a database was created in response to educators' need for up-to-date as well as archival information on all aspects of education. Named the Educational Resources Information Center (ERIC), this database is now the third most frequently searched online bibliographic database, according to Carol Tenopir in her article "Online Databases: The Most Popular Databases, published in *Library Journal*. (April 1, 1991, p. 96.) ERIC is used by policymakers, administrators, teachers, librarians, parents, students, and others who need education information.

In honor of ERIC's first 25 years of service, the National Trust for Historic Preservation hosted a reception at the Woodrow Wilson House in Washington, DC on April 30, 1991. Choosing the home of the 28th United States President was especially appropriate, since he was an esteemed educator, scholar, and the president of Princeton University.

More than 250 attended the event, including ERIC Clearinghouse Directors and staff, educators and librarians, Congressional staff, and agency officials from the Department of Education. The reception provided the opportunity to review how and why ERIC was started, where it has been, and where it is headed in the next quarter-century. Most importantly, it provided an opportunity to meet the dedicated men and women who created and maintain the world's largest education information network.

25TH ANNIVERSARY POSTERS

The ERIC 25th Anniversary Posters are now available. To have one sent to you, contact ACCESS ERIC at 1-800-USE-ERIC (873-3742) or send your request to: 1600 Research Boulevard, 3C, Rockville, MD 20878-3166. Multiple copies are available free.

Call 1-800-USE-ERIC

VENDOR NEWS

From BRS:

- Orbit is no longer an online vendor for the ERIC database. Both Orbit and BRS are owned by Maxwell Online, and the company has decided to offer ERIC only under the BRS umbrella. Orbit users who have questions should call the telemarketing department at 1-800-955-0906.

From DIALOG:

- As announced in the last *Interchange*, the ERIC database began indexing International Standard Serial Numbers (ISSN) and International Standard Book Numbers (ISBN) in its journals and journal article records in January 1991. This information now is being included in CIJE and RIE citations and is searchable on DIALOG.

  Beginning with UD=9107 (the July 1991 update), these numbers are searchable via their own fields. ISSN numbers can be searched using the standard DIALOG prefix SN=. For example, ISSN-0360-0025 should be searched ?S SN=0360-0025. ISBN numbers can be searched in the BN field.

  ISSN and ISBN numbers entered before UD=9107 are searchable in the RN field:

  ?S RN=ISSN-0001-8449
  ?S RN=ISBN-0-8106-1055-8

- In January, DIALOG announced a price reduction for DIALOG OnDisc ERIC. The current disc plus 9 years' backfile was reduced from $950 to $795. The complete file went from $1,650 to $1,295. Call DIALOG at 1-800-334-2564 for more information.

From OCLC:

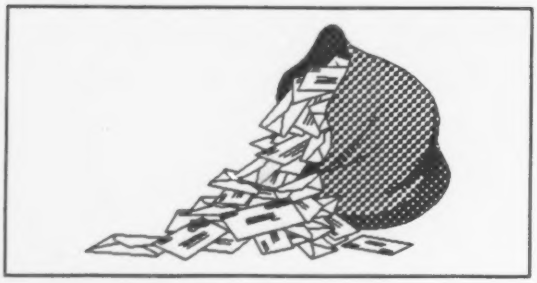
- The ERIC database has been available on OCLC's EPIC Service since April 1990. A new feature made available to users in July 1991 is SDI updating. This allows users to save a search strategy. As the database is updated, the search is automatically run, and the results are mailed to the user.
- Coming in fall 1991 is FirstSearch, OCLC's new end-user interface.

For information about these or other OCLC products, please call 1-800-848-5878.

From SilverPlatter:

- In April 1991, the ***Thesaurus of ERIC Descriptors*** became available directly on SilverPlatter's CD-ROM. This allows users to browse the permuted term list; select single or multiple terms for searching; view Scope Notes, Used For, Broader, Narrower, and Related terms; and explode terms with a single keystroke.
- Also announced in April was the release of the update to the SilverPlatter Information Retrieval System. Version 2.0 was sent to subscribers who use PC SPIRS. Several enhanced features give users more flexible options for searching, including the ability to save search strategies for use in later searches; more direct, faster on-disc HELP; the ability to select records for printing and downloading by marking records in SHOW; a redesigned OPTIONS feature which makes it easier to change parameters for showing, printing and downloading; and faster installation of updates since users do not have to completely reinstall the software.
- SilverPlatter and OCLC have formed a strategic alliance—SilverPlatter will become the CD-ROM publisher for OCLC's bibliographic CD-ROM products. Search CD450 subscribers will have the opportunity to transfer their subscriptions to SilverPlatter and receive the equivalent SilverPlatter discs and software at no additional cost. The companies also are exploring development of an online link between the CD-ROM and EPIC databases, as well as connections to OCLC's ILL and document ordering systems.
- SilverPlatter soon will be offering a new product, ERIC on Hard Disc. This is a high-performance network solution for multiuser access to the ERIC database. Up to 30 users can gain access simultaneously with the basic configuration. It will allow searching the entire database without switching discs, and search speed will be as much as 10 times faster than CD-ROM searching. Pre-indexed quarterly updates can be loaded instantly through an automated copy procedure.

See VENDOR NEWS, p. 7



Ask ERIC

Letters to the Editor

Do you have questions about the ERIC System or database? Take them straight to the source. Ask ERIC! Send questions to the *Interchange* Editor, c/o ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3166.

Q ***What are ERICTOOLS? How can they help librarians and library users?***

A ERICTOOLS refers to a variety of indexes, authority lists, and manuals which ERIC developed for its internal use but which also may be useful for users of the ERIC System. Examples of ERICTOOLS are: ***Title Index***, an alphabetical index of the titles of ERIC database documents; ***Source Directory***, an authority list of corporate entities preparing or sponsoring documents in the ERIC database; ***Identifier Authority List***, a list of supplementary subject index terms; and ***ERIC Processing Manual***, the internal rules and procedures ERIC Clearinghouses use in acquiring, selecting, cataloging, indexing, and abstracting documents. ERICTOOLS can be helpful to frequent users and searchers of the ERIC database. They are available from the ERIC Processing and Reference Facility.

Q ***How do the Clearinghouses decide what to index? Is indexing cover-to-cover? Who writes the abstracts?***

A Documents acquired by Clearinghouses go through a selection process, and about one in three documents is selected. Documents must be education-related, of good quality, and legible/reproducible. In addition, the author/source must give permission to process the document. Journals are selected on the basis of education-relatedness and quality. Some 750 journals are covered. The majority are covered selectively, while some are covered comprehensively. Author abstracts are used, but they also may be modified or replaced with an ERIC-written abstract. The word "author" appearing in parentheses at the end of an abstract identifies an author abstract. Journal articles are annotated (50-word maximum) rather than abstracted (300-word maximum). Most annotations are written by ERIC Clearinghouse staff. The ***ERIC Processing Manual*** chapter on "Selecting" can be obtained from the ERIC Facility for $5.00. See the "ERIC Clearinghouses and Other Network Components" attachment for the Facility's address and phone number.

Q ***How many documents are submitted to ERIC each year? Of those, how many are accepted into the database?***

A ERIC receives approximately 30,000 to 35,000 documents each year. From this group, 13,000 to 14,000 are selected for the database. In addition to documents, ERIC selects 18,000 to 20,000 journal articles, for a total of 30,000 to 35,000 bibliographic records processed for the ERIC database annually.

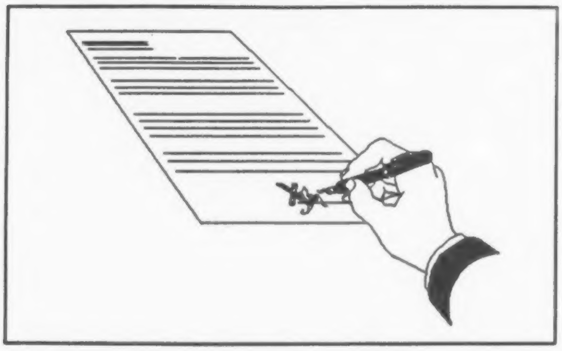
Q ***Where can ERIC users order materials with "EJ" numbers?***

A Nationally, there are several document delivery services which provide copies of journal articles. Two major suppliers providing reprints of journal articles included in the ERIC database are:

University Microfilms
International (UMI)
Article Clearinghouse
300 North Zeeb Road
Ann Arbor, MI 48106
1-800-732-0616

Institute for Scientific
Information (ISI)
Genuine Article Service
3501 Market Street
Philadelphia, PA 19104
1-800-523-1850

Some journals do not permit reprints. In that case, consult your local university or public library for an original issue of the journal, or write directly to the publisher. Addresses are listed in the front of CIJE.



BE AN ERIC AUTHOR

Submit your education-related papers, including:

- research/technical reports
- program/project descriptions
- monographs, treatises
- speeches, presentations
- bibliographies
- curriculum guides
- instructional materials
- manuals, handbooks
- legislation, regulations
- evaluation/feasibility studies
- opinion papers, essays, position papers
- other pertinent materials

Documents do not have to be formally published to be included in the database. In fact, ERIC seeks out the unpublished, "fugitive" material not usually available through conventional channels.

ERIC does not accept non-print materials (films, filmstrips, videotapes, tapes, records, cassettes, etc.) not associated with a printed text. If there is an acceptable printed form, ERIC will refer the user to accompanying non-print components of a work as long as a source of availability for them can be cited.

Advantages of Having a Document in ERIC:

- ERIC is available in approximately 3,000 locations throughout the world. More than 500,000 online searches of the ERIC database are performed annually.
- Documents in ERIC are announced to more than 2,000 organizations receiving the abstract journal *Resources in Education*. This can provide publicity for organizations wishing to sell their own documents in original copies.
- Documents in ERIC are reproduced on microfiche and distributed to more than 800 current subscribers to the ERIC microfiche collection.
- Bibliographic descriptions developed by ERIC are retrievable by the thousands of subscribers to online database retrieval services and compact disc (CD-ROM) systems.
- Copies can be made on-demand from the master microfiche collection at EDRS, which means documents in ERIC are constantly available and never go out of print.
- There is no charge for submitting documents to ERIC.

Selection Criteria:

All documents received are evaluated by subject experts against the following criteria: contribution to knowledge, relevance, innovativeness, effectiveness of presentation, thoroughness of reporting, timeliness, authority of source, intended audience, and comprehensiveness.

Documents may be typeset, typewritten, photocopied, or otherwise duplicated. They must be legible and easily readable. Standard 8 1/2" x 11" size pages are preferred. Colored inks and papers should be avoided, as they create reproduction problems.

For each document submitted, ERIC is required to obtain a formal signed Reproduction Release Form. To obtain a release form, write to ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3166, or call 1-800-USE-ERIC or the ERIC Processing and Reference Facility, 2440 Research Boulevard, Suite 400, Rockville, MD 20850-3238, 301/258-5500.

Where to Send Documents:

Documents usually enter the ERIC System through one of two ways: they are sent to the Clearinghouse most closely related to their subject matter, or they are sent to the ERIC Processing and Reference Facility. Clearinghouse and Facility addresses and phone numbers can be found on the attachment titled "ERIC Clearinghouses and Other Network Components."

Call 1-800-USE-ERIC

VENDOR NEWS, from p. 4

From SilverPlatter, (cont'd.):

ERIC on Hard Disc includes:

- A high-performance 80386 or 80486 file server with an Ethernet or Token Ring network connection;
- Novell Netware 386 LAN Operating System;
- A 2 GB hard disk subsystem expandable to 7 GB;
- A CD-ROM drive for loading quarterly updates;
- Installation and support by SilverPlatter and
- MultiPlatter Application Manager Software for integrating all LAN applications into a single menu.

For more information on these or other SilverPlatter products, call 1-800-343-0064.

ERIC Redefines "Level 2" Reproduction Permission

All documents entered into the ERIC database must have a signed Reproduction Release Form, indicating whether or not ERIC may reproduce the document for distribution. Historically, ERIC has had three "Levels" of reproduction permission. They are:

- Level 1, which means ERIC has received permission from the author or source institution for any and all kinds of reproduction—there are no restrictions.

- Level 2, which means ERIC may reproduce the document only in microfiche form. This usually happens when the source is distributing its own paper copies and does not want ERIC to compete for sales, or if the original copy is of such poor physical quality it can be archived on microfiche, but not blown back to a paper copy legible enough to sell.

- Level 3, which means ERIC may not reproduce the document at all—only cite the source of availability.

Advances in technology have made the definition of Level 2 too narrow. Restricting Level 2 to microfiche reproduction assumes microfiche always will be the archival method of choice. However, various kinds of electronic, electro-magnetic, and optical media probably will supplant microfiche in the not-too-distant future.

In order to pursue these technological opportunities, ERIC now finds it necessary to redefine Level 2. Instead of equating it with microfiche, it will be changed to "reproduction other than paper copy." This still prevents ERIC from competing with original sources for the sale of paper copy, but will not keep ERIC from pursuing state-of-the-art methods of document archival storage.

The various reproduction release forms, stickers, and labels are in the process of being revised and reprinted. The changeover should be in effect within the ERIC System by November 1991.

Fall Issue of *The ERIC Review* Highlights Parent Involvement

The upcoming issue of *The ERIC Review* addresses the timely topic of parent involvement in education. It features a lead article, "Parents and Schooling in the 1990s," by Erwin Flaxman, Director of the ERIC Clearinghouse on Urban Education, an article on parent involvement at the middle school level, written in both English and Spanish, and a reprinted *ERIC Digest* from the ERIC Clearinghouse on Educational Management on the topic of business-school relationships.

Also included are reading and resource lists and new titles recommended by the ERIC Clearinghouses and the Office of Educational Research and Improvement, U.S. Department of Education.

To order a free subscription to this journal (3 issues/year), call ACCESS ERIC, 1-800-USE-ERIC (873-3742).

ERIC Responds to AMERICA 2000

In 1990, President Bush and the state governors, with input from the education community and the public, formulated six National Education Goals to improve educational opportunity and achievement in this country dramatically by the year 2000. The National Education Goals are as follows:

1. By the year 2000, all children in America will start school ready to learn.

2. By the year 2000, the high school graduation rate will increase to at least 90 percent.

3. By the year 2000, American students will leave grades 4, 8, and 12 having demonstrated competency in challenging subject matter including English, mathematics, science, history, and geography; and

every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.

4. By the year 2000, U.S. students will be the first in the world in science and mathematics achievement.

5. By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

6. By the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning.

AMERICA 2000 is the President's long-range strategy to move every community in America toward the goals. It involves everyone — students, educators, and community members. Today's students will benefit from **Better and More Accountable Schools** measured through a 15-point accountability package that includes World Class Standards and American Achievement Tests. Tomorrow's students will have an opportunity to attend **A New Generation of American Schools**. The strategy calls for at least 535 of these schools (one in each Congressional district) to be operating by 1996. Designed to "break the mold" of traditional schooling, they will reach the six National Education Goals while responding to the unique characteristics of their communities.

AMERICA 2000 has educational implications not only for young people, but for all Americans. Since 85 percent of America's work force for the year 2000 is already in the work force today, the needs of adult learners must be addressed to ensure both a competitive economy and better-educated parents, neighbors, citizens, and friends. AMERICA 2000 calls for America to become **A Nation of Students**, in which every citizen is literate and continues lifelong learning through formal and informal channels to gain further knowledge and skills.

Finally, the strategy calls on individual communities to nurture their children and provide them with people and places to which they can turn for help, for role models, and for guidance. To create **Communities Where Learning Can Happen**, communities are being encouraged to adopt the National Education Goals, establish a community-wide strategy for achieving them, develop a means to measure progress, and be ready to create and support a New American School.

The resources of the ERIC database and 16 subject-specific ERIC Clearinghouses can help parents, educators, and communities achieve the six National Education Goals through the AMERICA 2000 strategy. The Clearinghouses have prepared and will continue to prepare *ERIC Digests* on Goals-related topics. Thirty new and revised *Digests* have been organized into a packet designed to provide readers with an overview of the goals and related issues. Titled *Striving for Excellence: The National Education Goals*, the packet will be available in late autumn.

Wanted—Retrieval Programs Which Operate on the ERIC Database

Over the years, the magnetic tapes containing the ERIC database have been distributed to hundreds of subscribers and purchasers. Some of these organizations have written their own retrieval software in order to access the data contained on the tapes. For example, the University of Pittsburgh developed a software called PIRETS; Auburn University developed QUANTARY.

Other organizations have written conversion programs which change the ERIC data into a "standard" format that can be operated on by off-the-shelf retrieval packages, such as FINDERS. Some applications have combined these two approaches.

ERIC is interested in gathering information on available retrieval software packages in order to help other organizations interested in using the ERICTAPES. If you have a software system (homegrown or commercial) for accessing the ERIC database on tape, we would like to hear about it. We particularly are interested in systems you would be willing to make available to others (whether free, at cost, or for a fee.)

Please send information concerning such systems (including the hardware requirements) to the ERIC Processing and Reference Facility, 2440 Research Boulevard, Suite 400, Rockville, MD 20850-3238.

NEW ERIC PUBLICATIONS, PRODUCTS AND SERVICES

The ERIC Clearinghouses and Support Components regularly produce new products and publications which guide users through the ERIC System or treat specific education issues. The ***Interchange*** is pleased to announce the following new items:

New from ACCESS ERIC

- ***1992 ERIC Calendar of Education-Related Conferences***
  $15.00, prepaid, available December 1991
  Includes information on a wide variety of international, national, state, regional, and local education-related conferences. Designed to help practitioners stay abreast of events scheduled for the next 12 months. Features five indexes that allow users to identify conferences of interest quickly and easily:
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- ***1992 Directory of ERIC Information Service Providers***
  Free, available November 1991
  List of 1000 organizations providing individuals with access to the ERIC database and related resources. Designed to help users quickly locate nearby organizations where ERIC resources and related services are available. Organized by state, and then by city, this directory also is indexed alphabetically by service provider name.

These publications are available from ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3166, 1-800-USE-ERIC (873-3742). Check, money order, Visa, or MasterCard accepted. Purchase orders only accepted from universities and state and local agencies.

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- *ERIC Identifier Authority List*
  Alphabetical Display ($40 U.S./$50 Non-U.S.)
  Category Display ($35 U.S./$45 Non-U.S.)

  A new April 1991 ERIC Identifier Authority List (IAL) is now available. ERIC Identifiers are subject terms used to index education documents or journal articles other than the terms found in the *Thesaurus of ERIC Descriptors*. Identifiers can be the names of specific entities, such as projects, pieces of legislation, persons, places, etc. Identifiers also can be new concepts, and later may be considered for descriptor status, once their meaning and staying power are established.

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  The new IAL has 2500 new identifiers, while 470 identifiers from earlier editions were purged, many because they were upgraded to *Thesaurus* descriptors.

This publication is available from the ERIC Processing and Reference Facility, 2440 Research Boulevard, Suite 400, Rockville, MD 20850-3238, 301/258-5500.

New from the ERIC Clearinghouse on Adult, Career, and Vocational Education

- *Competency-Based Career Development Strategies and the National Career Development Guidelines*
  Howard Splete and Amy Stewart
  Number IN 345; $10.50
  Gives an overview of the National Career Development Guidelines. Codes over 1,500 ERIC abstracts by National Guidelines areas and competencies as well as educational level. Provides sample career development activities.

This publication is available from the ERIC Clearinghouse on Adult, Career, and Vocational Education, Publications Office, Ohio State University, Center on Education and Training for Employment, 1900 Kenny Road, Columbus, OH 43210-1090, 1-800-848-4815. Orders should be made by purchase order or pre-payment. Orders of $10.00 or less should be prepaid.

New from the ERIC Clearinghouse on Educational Management

- *At-Risk Youth in Crisis*
  $7.50/volume
  This series of handbooks promotes interagency agreement on procedures for managing crisis situations with at-risk students. **Vol. 3: Child Abuse** provides information to school personnel on how to prevent child abuse, assist victims, and complement treatment provided by other agencies. **Vol. 4: Substance Abuse** discusses how school administrators can respond more effectively to immediate substance abuse crises and develop policies and procedures aimed at prevention.

Available from the ERIC Clearinghouse on Educational Management, University of Oregon, 1787 Agate Street, Eugene, OR 97403-5207, 503/346-5043.

New from the ERIC Clearinghouse on Handicapped and Gifted Children

- *Working With Behavioral Disorders Mini Library*
  $8.90/book; $72.00/set
  This collection of nine short books is a great reference for helping staff understand problems of specific groups of youngsters with behavioral problems. Developed with the practitioner in mind, they can be read in one sitting. At the beginning of each is a page highlighting the practical ideas presented in the text. May be ordered as a set (P346) or individually.

- *Flyer Files* (Preprinted file folders ready to store in a file drawer.)

  "Flyer File on Gifted Students"
  Number E105; $24.00, prepaid.

  "Flyer File on Culturally and Linguistically Diverse Exceptional Learners"
  Number E106; $24.00, prepaid.

These items are available from the ERIC Clearinghouse on Handicapped and Gifted Children, The Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091-1589, 703/264-9474.

New from the ERIC Clearinghouse on Information Resources

- *A Practical Guide to Preservation in School and Public Libraries*
  Maxine K. Sitts
  IR-90; $6.50
  School and public libraries play a pivotal role in saving the nation's scholarly, historical, and intellectual heritage. This guide suggests ways to approach preservation and access. Guidelines and resources for a preservation plan are presented in a framework of three key essentials: Awareness: The Big Picture; Judgment: What to Do, When and How; and Advocacy: How to Influence. Topics covered include brittle books, American Library Association and other initiatives, environmental conditions, maintenance, repair, binding, local history, disasters and emergencies, supporters and funders, vendors, and users. Two appendices provide information on the development of the nationwide program and the Commission on Preservation and Access.

- *Distance Education and the Changing Role of the Library Media Specialist*
  Michael A. Burke
  IR-85; $5.00
  Presents an overview of the current status of telecommunications-based distance education at the K-12 level in the United States, and describes a potentially pivotal role for the school library media specialist in the facilitation of instructional programs delivered via various technologies. The changing role of the library media specialist as defined by *Information Power* (AASL & AECT, 1988) is considered as well as the need for distance education technology that has resulted from demographic and socioeconomic changes in America. Current applications of distance education technology and its use to meet the changing needs of elementary and secondary school students and staff are described with examples from northeastern Wisconsin.

- *Trends and Issues in Library and Information Science*
  Michael B. Eisenberg, et al.
  IR-89; $7.50
  Second biennial study reporting the results of a systematic content review of the literature of the field, including selected journals, conference proceedings, input into the ERIC document collection (RIE), and dissertations. A detailed explanation of the research methodology and data collection/analysis sheets used by the researchers are appended.

- *Learning Technology Resource Guide*
  Lisa Crooks Zugner, ed.
  IR-87; $6.00
  This guide offers electronic technologies information to be used by federal, state, local, and private education officials in the improvement of learning and instruction. It offers a broad range of information about selected projects, centers, institutions, clearinghouse activities, courseware, software, unique products and services, consortia, panels, forums,

commissioned reports, and other available resources related to electronic technologies.

- *Survey of Instructional Development Models, Second Edition*
Kent L. Gustafson
IR-91; $7.50
Reviews some of the current instructional development models, presents a taxonomy for classifying them, and describes trends in their content and focus. A list of references and an annotated bibliography of selected ID models found in the ERIC database are included.

These publications are available from the ERIC Clearinghouse on Information Resources, 030 Huntington Hall, Syracuse University, Syracuse, NY 13244-2340, 315/443-3640. Postage and handling charges: $2.00 for first item, $.50 for each additional item. Make checks payable to Information Resources Publications.

New from the ERIC Clearinghouse on Junior Colleges

Two new issues of the "New Directions for Community Colleges" series:

- *Writing Across the Curriculum*
Linda C. Stanley and Joanna Ambron, eds.
Number 73
A rich source of information about WAC programs in community colleges. Although the configurations, goals, and practices of such programs differ, all assume an intimate connection between language and learning, as well as a need for improved literacy and communication skills in community college students.

- *Rekindling Minority Enrollment and Growth*
Dan Angel and Adriana Barrera, eds.
Number 74
Provides firsthand information on issues affecting minority student participation in America's community colleges. Includes comprehensive descriptions of programs and services aimed at providing access to community college education for affected minority groups and of recruitment and retention activities. Further, particular attention has been given to issues concerning minority student transfer to four-year postsecondary institutions and the professional development of minority staff.

Issues of ***New Directions for Community Colleges*** are available from Jossey-Bass Inc., Publishers, 350 Sansome Street, San Francisco, CA 94101, for $15.95 per issue, prepaid.

- *Preparing Women and Minorities for Careers in Math and Science: The Role of Community Colleges*
Grace Quimbata
Free *ERIC/JC Digest*
Provides an overview of the efforts community colleges are undertaking to increase the number of minorities and women pursuing studies and careers in math and sciences. It presents examples of programs throughout the country, including precollege-community college linkages, programs at the community college level, and linkages with four-year institutions.

For free copies of this *Digest*, contact the ERIC Clearinghouse on Junior Colleges, University of California at Los Angeles, 8118 Math-Sciences Building, Los Angeles, CA 90024-1564, 213/825-3931.

New from the ERIC Clearinghouse on Reading and Communication Skills

- *ERIC/RCS Catalog* a 24-page listing of all RCS Clearinghouse publications.

- *Writing for Successful Publication*
Kenneth T. Henson
Number CS 212 771; $21.95 plus postage and handling
Written for academics, this is a practical how-to guide for writing successfully. Henson explains how to get motivated, find good, fresh topics, choose a style, organize articles to be "reader-friendly," get a contract, increase acceptance rate, and communicate effectively with publishers and editors.

These publications are available from the ERIC Clearinghouse on Reading and Communication Skills, Indiana University, Smith Research Center, Suite 150, 2805 East 10th Street, Bloomington, IN 47408-2698, 812/855-5847.

New from the ERIC Clearinghouse on Rural Education and Small Schools

- ***Systematic Reform in Six Rural Districts: A Case Study of First Reactions to the Kentucky Education Reform Act of 1990***
  Pamela Coe and Patricia Kannapel
  $10.50, including shipping and handling
  Report discussing reactions to the Kentucky Education Reform Act (KERA) of 1990, the most comprehensive case of school restructuring taking place in the U.S. today. Discusses interviews with educators and community members in rural Kentucky, and their reactions to the changes being made in the public school systems.

This publication is available from the ERIC Clearinghouse on Rural Education and Small Schools, Appalachia Educational Laboratory, 1031 Quarrier Street, P.O. Box 1348, Charleston, WV 25325-1348, 1-800-624-9120 (outside WV) or 1-800-344-6646 (in WV).

New from the ERIC Clearinghouse on Social Studies/Social Science Education

- ***Resources for Teachers on the Bill of Rights***
  John J. Patrick and Robert S. Leming, eds.
  $17.00, including shipping and handling
  Includes ideas and information to enhance education about the constitutional rights of individuals in American history and the current system of government in the United States. Contains nine distinct parts dealing with divergent aspects of learning and teaching about the Bill of Rights in both elementary and secondary schools. Virtually every teacher of history, civics, and government will find something in this publication to contribute to improvement of lesson planning and execution of learning activities on Bill of Rights topics and issues.

This publication is available from the ERIC Clearinghouse on Social Studies/Social Science Education, Publications Manager, Social Studies Development Center, Indiana University, 2805 East 10th Street, Suite 120, Bloomington, IN 47408-2373, 812/855-3838.

The *ERIC Users' Interchange* is published twice a year by ACCESS ERIC.

Editor .... Kristine D. Kaplan

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Look for the next issue in March 1992.

ERIC

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ERIC DIGEST

May 1991

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Information Technology and the Informed Citizen: New Challenges for Government and Libraries

by Charles S. White

Thomas Jefferson wrote:

> If a Nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be.... [I]f we are to guard against ignorance and remain free, it is the responsibility of every American to be informed. (Letter to Colonel Charles Yancey, January 6, 1816)

The link between popular government and an informed citizenry was a theme that ran throughout Jefferson's writings and efforts, from the establishment of the University of Virginia to his advocacy of public libraries. Every generation since has faced the challenge of achieving an informed citizenry that is capable of making reasoned decisions and acting on those decisions. The current generation of citizens is faced with a three-fold challenge made more difficult by the volume and complexity of information relevant to public affairs: (1) how to access information, (2) how to find the best information for the given task, and (3) how to make sense of the information once obtained (that is, how to transform information into useful knowledge). The burden of citizens in becoming informed has increased dramatically as electronic technology has accelerated the production and transmission of information. As in Jefferson's time, libraries continue to be essential institutions as people in the "Information Age" grapple with their responsibility to become informed.

Information Access: Libraries as Gateways

Arguably the largest generator of information relevant to public affairs is government, especially at the federal level. Significant amounts of data are collected and processed annually. While substantial legislative and regulatory action has been directed at rationalizing federal information policies regarding the collection and management of government information, relatively little attention has been focused until recently on dissemination, the final phase of the information cycle. This is especially true of information in electronic formats.

Recognizing its obligation to make government information accessible to citizens, Congress established the Government Printing Office (GPO) (1895) and the Depository Library System (1962). The latter now comprises 1,400 libraries nationwide, as well as 53 Regional Depository Libraries, whose purpose is to provide the general public with the greatest possible access to government information. With the advent of electronic information systems, federal information dissemination policies and the traditional functions of libraries are strained in achieving the goal of informing the population.

According to an Office of Technology Assessment report (OTA, 1988), the number of civilian agency publications in paper format has been gradually declining, while those in electronic formats increased more than three-fold in the four years prior to the report. Pushed forward by an array of technological advances that show no signs of abating, the growing availability of electronically based public information carries both benefits and costs. On the benefit side, more information can be tapped more rapidly than ever before, including low-demand databases that heretofore could not be disseminated in a cost-effective manner through centralized production (via the GPO, for example).

Costs and Issues

On the cost side, however, are several thorny issues that must be addressed for the benefits to be realized. These issues are identified below.

Government information dissemination policies. How can we rationalize government dissemination of electronic information to ameliorate the current confusion of institutional roles and responsibilities (who publishes what)? Should federal agencies sell their databases or only services derived from those databases? Should agencies wholesale or retail their information products? How much should users (libraries and citizens) be charged for electronic information products, and does this depend on the relevance of the information to significant public policy issues (Bortnick, 1988)?

Privatization of information sources. The federal government spends in excess of $6 billion on information dissemination (OTA, 1988). In an era of budgetary reductions, and the likely expansion of electronic information products, how much can the government afford to pay for dissemination, and how much will it transfer to commercial database vendors? Will such a transfer mean relatively high user access fees, the elimination of low-profit databases that serve only specialized needs, copyright and similar controls over the public information such vendors sell, undue self-interested influence over the delivery of public information, and the concentration of information delivery services in a limited number of commercial vendors (Gapen et al., 1987)?

Usability of information by the user. Electronic information products are not always readily usable by the individual who needs them. For example, some information might consist of raw data files on computer tape, requiring sophisticated hardware and statistical software at the user end. Who will provide and pay for these "value-added" interfaces that make electronic information more usable by those who need it (Gapen et al., 1987)?

Equity of access. Related to the previous issue is the cost one must pay to play in the electronic information game; namely, the hardware and software required to access electronic information. A good deal has been made of direct citizen access to information with the growing availability of inexpensive computers and communications software. Schuman (1990) reminds us, however, that 25 percent of households below the poverty level have no telephone, and only 13 percent of households own a computer (only 10 percent of these with modems). The more immediate likelihood is a growing gap between the information-rich and information-poor, with the latter unable to access the growing proportion of public information available only in electronic formats (Gapen et al., 1987).

As libraries continue to fulfill their roles as gateways to public information, it seems likely that they will assume increasing responsibility for providing access to electronic information sources. While maintaining access to existing print-based information, libraries will also have to grapple with the issues enumerated above, in collaboration with government agencies and commercial database vendors. Decisions will have to be made regarding which libraries will provide what levels of access to what electronic information products at what cost, based perhaps on particular characteristics of the information products (Gapen et al., 1987).

Finding the Right Information and Using it Effectively: Libraries as Guides and Educators

Providing a gateway to networks of electronic information is only one challenge facing libraries in the years to come. Libraries also serve as *guides*, not only filling specific information needs but solving information problems (Schuman, 1990). For the foreseeable future, the "expert system" people will use to seek answers to information problems will be librarians (more appropriately, *information specialists*), whose traditional expertise as information searchers will have to expand to navigate skillfully the growing web of interconnected electronic databases. A knowledgeable guide significantly lightens the burden users must bear in finding the information they need.

Libraries must also serve as *educators*, helping citizens to hone their own information problem-solving skills. The information specialist can help people to identify multiple perspectives on public policy issues, to clarify their questions, and to identify what information they need to answer their questions. Patrons also frequently seek help in *interpreting* the information they have found; that is, in converting information into knowledge. Such requests will likely multiply, as citizens are confronted with increasing volumes of information and with policy issues requiring greater understanding of scientific, technical, and social information.

A Multidimensional Challenge

This last point about constructing knowledge from information underscores how complex is the contemporary challenge to build a solid foundation for an informed citizenry. Neither access nor guidance nor skill development alone is sufficient to the task. All three supports must be in place. This suggests the need for multiple institutions to change, individually and in concert. Government information policies need to be rationalized, and education institutions serving children and adults must focus more attention on the construction of knowledge. Finally, libraries must interact effectively with government, education institutions, and the commercial sector. The functions of libraries as gateways, guides, and educators must expand and change to meet the information needs of citizens in a 21st-century democracy.

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This digest was prepared for the ERIC Clearinghouse on Information Resources and the ERIC Clearinghouse for Social Studies/Social Science Education by Charles S. White, Associate Professor, Center for Interactive Educational Technology, Graduate School of Education, George Mason University, Fairfax, Virginia.

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ERIC CLEARINGHOUSES *(and Other Network Components)*

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the database, and also for providing information analysis products and various user services based on the database.

The exact number of Clearinghouses has fluctuated over time in response to the shifting needs of the educational community. There are currently 16 Clearinghouses. These are listed below, together with full addresses, telephone numbers, and brief scope notes describing the areas they cover.

ERIC Clearinghouse on *Adult, Career, and Vocational Education* (CE)
Ohio State University
Center on Education and Training for Employment
1900 Kenny Road
Columbus, Ohio 43210-1090
Telephone: (614) 292-4353;
(800) 848-4815 Fax: (614) 292-1260

All levels of adult and continuing education from basic literacy training through professional skill upgrading. The focus is upon factors contributing to the purposeful learning of adults in a variety of life situations usually related to adult roles (e.g., occupation, family, leisure time, citizenship, organizational relationships, retirement, and so forth).

ERIC Clearinghouse on *Counseling and Personnel Services* (CG)
University of Michigan
School of Education, Room 2108
610 East University Street
Ann Arbor, Michigan 48109-1259
Telephone: (313) 764-9492 Fax: (313) 747-2425

Preparation, practice, and supervision of counselors at all educational levels and in all settings. Theoretical development of counseling and guidance, including the nature of relevant human characteristics. Use and results of personnel practices and procedures. Group process (counseling, therapy, dynamics) and case work.

ERIC Clearinghouse on *Educational Management* (EA)
University of Oregon
1787 Agate Street
Eugene, Oregon 97403-5207
Telephone: (503) 346-5043 Fax: (503) 346-5890

All aspects of the governance, leadership, administration, and structure of public and private educational organizations at the elementary and secondary levels, including the provision of physical facilities for their operation.

ERIC Clearinghouse on *Elementary and Early Childhood Education* (PS)
University of Illinois
College of Education
805 W. Pennsylvania Avenue
Urbana, Illinois 61801-4897
Telephone: (217) 333-1386 Fax: (217) 333-3767

All aspects of the physical, cognitive, social, emotional, educational, and cultural development of children, from birth through early adolescence. Among the topics covered are: prenatal and infant development and care; parent education; home and school relationships; learning theory research and practice related to children's development; preparation of early childhood teachers and caregivers; and educational programs and community services for children.

ERIC Clearinghouse on *Handicapped and Gifted Children* (EC)
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091-1589
Telephone: (703) 264-9474 Fax: (703) 264-9494

All aspects of the education and development of persons (of all ages) who have disabilities or who are gifted, including the delivery of all types of education-related services to these groups. Includes prevention, identification and assessment, intervention, and enrichment for these groups, in both regular and special education settings.

ERIC Clearinghouse on *Higher Education* (HE)
George Washington University
One Dupont Circle, N.W., Suite 630
Washington, D.C. 20036-1183
Telephone: (202) 296-2597 Fax: (202) 296-8379

All aspects of the conditions, programs, and problems at colleges and universities providing higher education (i.e., four-year degrees and beyond). This includes: governance and management; planning; finance; inter-institutional arrangements; business or industry programs leading to a degree; institutional research at the college/university level; Federal programs; legal issues and legislation; professional education (e.g., medicine, law, etc.) and professional continuing education.

ERIC Clearinghouse on *Information Resources* (IR)
Syracuse University
Huntington Hall, Room 030
800 University Avenue
Syracuse, New York 13244-2340
Telephone: (315) 443-3640 Fax: (315) 443-5732

Educational technology and library/information science at all academic levels and with all populations, including the preparation of professionals. The media and devices of educational communication, as they pertain to teaching and learning (in both conventional and distance education settings). The operation and management of libraries and information services. All aspects of information management and information technology related to education.

ERIC Clearinghouse for *Junior Colleges* (JC)
University of California at Los Angeles (UCLA)
Math-Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024-1564
Telephone: (213) 825-3931 Fax: (213) 206-8095

Development, administration, and evaluation of two-year public and private community and junior colleges, technical institutes, and two-year branch university campuses. Two-year college students, faculty, staff, curricula, programs, support services, libraries, and community services. Linkages between two-year colleges and business/industrial/community organizations. Articulation of two-year colleges with secondary and four-year postsecondary institutions.

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ERIC Clearinghouse on *Languages and Linguistics* (FL)
Center for Applied Linguistics
1118 22nd Street, N.W.
Washington, D.C. 20037-0037
Telephone: (202) 429-9551 Fax: (202) 429-9766

Languages and language sciences. All aspects of second language instruction and learning in all commonly and uncommonly taught languages, including English as a second language. Bilingualism and bilingual education. Cultural education in the context of second language learning, including intercultural communication, study abroad, and international educational exchange. All areas of linguistics, including theoretical and applied linguistics, sociolinguistics, and psycholinguistics.

ERIC Clearinghouse on *Reading and Communication Skills* (CS)
Indiana University, Smith Research Center
2805 East 10th Street, Suite 150
Bloomington, Indiana 47408-2698
Telephone: (812) 855-5847 Fax: (812) 855-7901

Reading and writing, English (as a first language), and communications skills (verbal and nonverbal), kindergarten through college. Includes family or intergenerational literacy. Research and instructional development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication (including forensics), mass communication (including journalism), interpersonal and small group interaction, oral interpretation, rhetorical and communication theory, and theater/drama. Preparation of instructional staff and related personnel in all the above areas.

ERIC Clearinghouse on *Rural Education and Small Schools* (RC)
Appalachia Educational Laboratory
1031 Quarrier Street
P.O. Box 1348
Charleston, West Virginia 25325-1348
Telephone: (800) 624-9120 (Outside WV)
(800) 344-6646 (In WV) Fax: (304) 347-0487

Curriculum and instructional programs and research/evaluation efforts that address the education of students in rural schools or districts, small schools wherever located, and schools or districts wherever located that serve American Indian and Alaskan natives, Mexican Americans, and migrants, or that have programs related to outdoor education. Includes the cultural, ethnic, linguistic, economic, and social conditions that affect these educational institutions and groups. Preparation programs, including related services, that train education professionals to work in such contexts.

ERIC Clearinghouse for *Science, Mathematics, and Environmental Education* (SE)
Ohio State University
1200 Chambers Road, Room 310
Columbus, Ohio 43212-1792
Telephone: (614) 292-6717 Fax: (614) 292-0263

Science, mathematics, engineering/technology, and environmental education at all levels. The following topics when focused on any of the above broad scope areas: applications of learning theory; curriculum and instructional materials; teachers and teacher education; educational programs and projects; research and evaluative studies; applications of educational technology and media.

ERIC Clearinghouse for *Social Studies/Social Science Education* (SO)
Indiana University
Social Studies Development Center
2805 East 10th Street, Suite 120
Bloomington, Indiana 47408-2698
Telephone: (812) 855-3838 Fax: (812) 855-7901

All aspects of Social Studies and Social Science Education, including values education (and the social aspects of environmental education and sex education), international education, comparative education, and cross-cultural studies in all subject areas (K-12). Ethnic heritage, gender equity, aging, and social bias/discrimination topics. Also covered are music, art, and architecture as related to the fine arts.

ERIC Clearinghouse on *Teacher Education* (SP)
American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, N.W., Suite 610
Washington, D.C. 20036-1186
Telephone: (202) 293-2450 Fax: (202) 457-8095

School personnel at all levels. Teacher recruitment, selection, licensing, certification, training, preservice and inservice preparation, evaluation, retention, and retirement. The theory, philosophy, and practice of teaching. Organization, administration, finance, and legal issues relating to teacher education programs and institutions. All aspects of health, physical, recreation, and dance education.

ERIC Clearinghouse on *Tests, Measurement, and Evaluation* (TM)
American Institutes for Research (AIR)
Washington Research Center
3333 K St., N.W.
Washington, DC 20007-3541
Telephone: (202) 342-5060 Fax: (202) 342-5033

All aspects of tests and other measurement devices. The design and methodology of research, measurement, and evaluation. The evaluation of programs and projects. The application of tests, measurement, and evaluation devices/instrumentation in educational projects and programs.

ERIC Clearinghouse on *Urban Education* (UD)
Teachers College, Columbia University
Institute for Urban and Minority Education
Main Hall, Room 300, Box 40
525 W. 120th Street
New York, New York 10027-9998
Telephone: (212) 678-3433 Fax: (212) 678-4048

The educational characteristics and experiences of the diverse racial, ethnic, social class, and linguistic populations in urban (and suburban) schools. Curriculum and instruction of students from these populations and the organization of their schools. The relationship of urban schools to their communities. The social and economic conditions that affect the education of urban populations, with particular attention to factors that place urban students at risk educationally, and ways that public and private sector policies can improve these conditions.

Educational Resources Information Center (Central ERIC)
U.S. Department of Education
Office of Educational Research and Improvement (OERI)
555 New Jersey Ave., N.W.
Washington, D.C. 20208-5720
Telephone: (202) 219-2289 Fax: (202) 219-1817

ERIC Processing & Reference Facility
ARC Professional Services Group
Information Systems Division
2440 Research Boulevard, Suite 400
Rockville, Maryland 20850-3238
Telephone: (301) 258-5500 Fax: (301) 948-3695

ERIC Document Reproduction Service (EDRS)
Cincinnati Bell Information Systems (CBIS) Federal
7420 Fullerton Road, Suite 110
Springfield, Virginia 22153-2852
Telephone: (703) 440-1400
(800) 443-ERIC Fax: (703) 440-1408

Oryx Press
4041 North Central Avenue at Indian School, Suite 700
Phoenix, Arizona 85012-3397
Telephone: (602) 265-2651
(800) 279-6799 Fax: (602) 265-6250

ACCESS ERIC
Aspen Systems Corporation
1600 Research Boulevard
Rockville, Maryland 20850-3166
Telephone: (301) 251-5045
(800) 873-3742 Fax: (301) 251-5212

ERIC Users' Interchange Response Form

What are your impressions of ERIC? Your opinion is a vital part of the ERIC System's ongoing efforts to improve its products and services. Please help us continue to serve your information needs by completing this brief response form and mailing it to:

Editor, ***Interchange***
ACCESS ERIC
1600 Research Blvd., 3C
Rockville, MD 20850–3166

1. Please check the most popular ERIC medium for your:

	Print Products	Online	CD-ROM
Users	☐	☐	☐
Staff	☐	☐	☐

2. Do you keep statistics on the frequency of use of ERIC products?

☐ Yes ☐ No

If yes, would you be willing to share your statistics with the ERIC staff? (Please provide your name, address, phone number, and the nature of the statistics you keep.)

____
____
____
____
____

3. What new training materials would you recommend ERIC develop to help explain the ERIC System?

____
____
____

4. Are you interested in receiving ERIC documents on storage/retrieval mediums other than microfiche?

☐ Yes ☐ No

If yes, which ones? ______________________________
____
____

5. What information or topics would you like to see included in future issues of the *Interchange*? (Please be specific)

____
____
____
____
____

Thank you for your cooperation.

Call 1-800-USE-ERIC

ERIC® USERS' INTERCHANGE

March 1992

SPECIAL INTEREST NEWS FOR *INTERCHANGE* READERS

ERIC Tapes on Networks Expand Access for Users

Advances in computer software and hardware technology are making ERIC and other computer-readable databases available to more and more people. Local and wide area networks allow multiple users to access database files simultaneously from remote locations such as personal computers at home, and from multiple workstation environments such as online public access catalogs (OPACs) in libraries. However, these new systems require organizations to purchase expensive hardware and develop software interfaces, which can prove to be a challenge both technically and financially.

Some organizations have found ways to make databases such as ERIC accessible to a wider audience, often at little or no cost to the users. This article discusses two groups that have loaded the ERIC tapes onto a network and are thus making the database available free to users.

The SPIRES Consortium

Stanford University, in cooperation with approximately 40 other institutions, has developed a software package that allows more faculty, researchers, staff, and students to use the ERIC database because it runs on a mainframe with multiple-user capabilities.

The software is called SPIRES, short for the Stanford Public Information Retrieval System. The institutions that use this system form the SPIRES Consortium, and all share in the expenses of developing the software and using the databases loaded onto the system by becoming licensed subscribers and paying annual

See ERIC TAPES, p. 2

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Interchange Mailing List Update

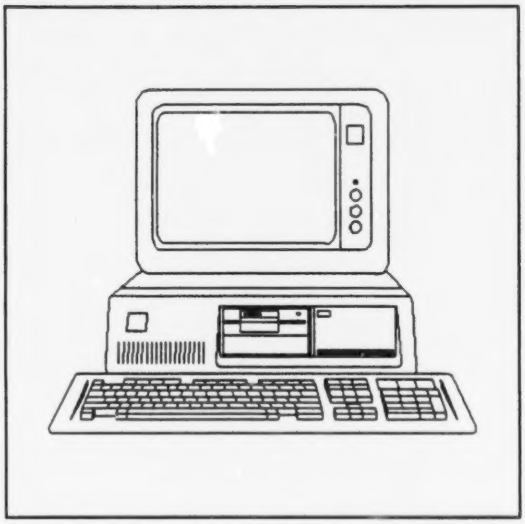
The last page of this issue of *The Interchange* is a form requesting readers to update their address and phone number information for our records. To continue receiving *The Interchange*, fill out the form and mail or fax it to the address listed, or call 1-800-USE-ERIC (873-3742) to correct the information by phone. **Names which are not updated will be deleted.**

The *ERIC Users' Interchange* was prepared by ACCESS ERIC, a project of Aspen Systems Corporation under contract #RI890120 for the Office of Educational Research and Improvement, U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express their judgment in professional and technical matters. Points of view or opinions do not necessarily represent official Department of Education positions or policies. All questions, correspondence, and contributions should be directed to the Editor of *The Interchange*, ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3172, 1-800-USE-ERIC (873-3742).

ERIC TAPES, from p. 1

membership fees. Consortium members must be either non-profit institutions of higher education, research institutions, or government agencies. Some of the other SPIRES Consortium members in the U.S. are Syracuse University, the University of Illinois at Chicago, and Princeton University, and in Canada, the Memorial University of Newfoundland and the University of Alberta.

SPIRES originally was developed as a database management system for bibliographic applications. It is a 4th-generation database management system and is a powerful tool for storing, organizing, retrieving, and displaying textual information. Stanford uses SPIRES to operate the university's purchasing system and online library catalog and perform many other information management tasks.



To add the ERIC database to the system, the consortium purchased the ERIC tapes from the ERIC Processing and Reference Facility, developed a software interface, and loaded both onto SPIRES. Users can access SPIRES at the university campuses and via modem in order to search the ERIC database. ERIC is one of several databases loaded onto SPIRES at Stanford. Others currently available include PsycINFO, INSPEC, Ei/Compendex, and Harvard Business Review. Work has just begun on loading ABI/Inform and GeoRef, and BIOSIS loading is scheduled for completion in August 1992.

The State University System of Florida

The State University System of Florida (SUS) is another group making ERIC available for multi-user access in a large geographic area. Nine publicly funded universities share a single installation of the NOTIS Library Management System. This system is managed by the Florida Center for Library Automation (FCLA), an agency of the SUS.

Library functions such as circulation and acquisitions are operated on the NOTIS system at more than 50 library sites in the university system. In addition, NOTIS supports the libraries' online public access catalog via the LUIS (Library User Information Service) module, which contains more than seven million bibliographic records.

FCLA converted the ERIC file to MARC bibliographic format and loaded it as a separate database on LUIS. The ERIC database is searchable through the same access software supporting the online catalog. This software includes FCLA-developed keyword and Boolean searching, which allows retrieval in most of the ERIC fields using Boolean operators.

Use of ERIC grows steadily within and outside the universities. Like the LUIS library catalogs, ERIC is accessible from more than 1,500 dedicated library terminals and 10,000 terminals in faculty offices and computer labs on the nine campuses.

In addition, the Florida Department of Education funds a telecommunication network, called the Florida Information Resources Network (FIRN), which provides free connection to ERIC for all public schools, community colleges, and public libraries in the state. A local phone call is all that is required to connect to ERIC through FIRN. ERIC also is accessible via Internet and by direct dial connection to the Gainesville computer.

Users are not charged for searching ERIC on the SUS system, nor do the individual libraries pay to support the service. Database costs, disk storage, CPU usage, and personnel costs are borne by FCLA.

ERIC was the first non-catalog database to be loaded onto LUIS; two Information Access Corporation databases were loaded in late 1991 and two Wilson

See ERIC TAPES, p. 3

ERIC TAPES, from p. 2

databases are scheduled for spring 1992. More databases will be added as resources become available. Unlike ERIC, these other databases are proprietary and are limited by contract to the universities—they will not be available to users outside the university system.

Some SUS libraries have discontinued their subscriptions to the CD-ROM version of ERIC, while others have elected to keep it until the FCLA system can offer more sophisticated retrieval, printing, and downloading features, all of which are under development.

In future issues, *The Interchange* will continue to report on new ways the ERIC tapes are being made available to wider audiences at little or no cost to users. If you currently are involved in developing or operating a similar system and are willing to share your experiences with loading ERIC onto your network, please contact the Editor of *The Interchange*, ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3172, 1-800-USE-ERIC (873-3742).

For more information on the programs discussed in this article, contact the following:

SPIRES
Consortium Office
Jordan Quadrangle
Stanford University
Stanford, CA 94305-4136
415/725-1308

The Florida Center for Library Automation
2002 NW 13th Street, Suite 320
Gainesville, FL 32609
904/392-9020.
(NOTIS is a commercial product available from NOTIS Systems, Inc., an Ameritech Corporation subsidiary.)

To obtain information about the ERIC tapes, contact the
ERIC Processing and Reference Facility
1301 Piccard Drive, Suite 300
Rockville, MD 20850-4305
301/258-5500.

Special thanks to Bo Parker at Stanford and Michele Dalehite at FCLA for their contributions.

EDRS Announces Price Changes

Effective January 1, 1992, prices changed for most ERIC products available through the ERIC Document Reproduction Service (EDRS). Prices for ERIC Clearinghouse collections remained at the 1991 rate of $ .280 per microfiche card. Price changes for other EDRS products are as follows:

	1991 Rate	New Rate
Monthly Subscriptions (per microfiche card)	$ .111	$ .109
Back Collections (per microfiche card)	.131	.138
On-demand Microfiche (per title, up to 5 fiche)	1.152	1.161
On-demand Paper Copies (first 25 pages - add $3.20 for each additional 25-page increment)	3.12	3.20

If you have any questions regarding the price increases, contact EDRS at 1-800-443-ERIC (3742).

ERIC is 3rd Most Searched Database in the U.S.

The popularity of ERIC continues to grow for both online and CD-ROM searching. A recent report identified ERIC as the third most searched database out of a field of more than 5,600 computer-readable databases available from 850 vendors in the U.S. (Tenopir, Carol. "Online Databases," *Library Journal*. April 1, 1991, pp. 96-98.)

The report also listed ERIC as the second most searched database among academic libraries, and the database used most frequently by public libraries in the United States and Canada. The report indicates ERIC is the most popular database on CD-ROM used by libraries and information centers and the second most popular database used among research, specialized, and university libraries.

New EDRS Products Target Practitioners

EDRS is committed to developing new ERIC products that will appeal to nontraditional users of ERIC, as well as to its current customer base.

Work is progressing on a retrospective look at educational trends. This will be published under the title *Beyond Reading, Writing, and Arithmetic: A Longitudinal Look at How Schools Have Responded to Changing Societal Needs*. The publication should be available for sale in the spring of 1992.

EDRS also is developing microfiche collections to appeal to practitioners, secondary school students, and other nontraditional ERIC users. The first collection, currently under development, provides ERIC information on developing an AIDS education program. This collection of ERIC documents is intended to appeal to an audience of education practitioners. EDRS anticipates the product will be available sometime in late winter 1992.

The second and third microfiche collections will focus on the area of multicultural education. They will include a program development collection for practitioners and a research collection for secondary school students. These collections are still in the planning phase.

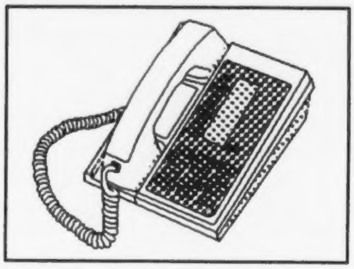
If you have questions about these or other products distributed by EDRS, call 1-800-443-ERIC (3742) or write to the ERIC Document Reproduction Service, 7420 Fullerton Road, Suite 110, Springfield, VA 22153-2852.

Calling All Librarians!!

The ERIC System receives many requests for quick reference sheets on how to search ERIC online, on CD-ROM, and in paper and microfiche form. Since many of you already have developed "cheat sheets," *The Interchange* would like to borrow what you have written in order to create a packet of quick reference sheets to help users.

If possible, please send us a copy of any ERIC reference sheets you have written. We will review all we receive and combine them to develop concise, user-friendly aids to searching the ERIC database. These eventually will be made available to ERIC users.

If you are interested in contributing to this project, please send or fax the reference sheets to: ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3172, 301/251-5747 (FAX).



EDRS Establishes Toll-free Calling for Canadian Users

The ERIC Document Reproduction Service's (EDRS) toll-free number, 1-800-443-ERIC (3742), is now available to Canadian users. This gives Canadians the ability to order ERIC documents quickly, easily, and inexpensively with a free phone call to EDRS.

ERIC Facility Moves to New Location

The ERIC Processing and Reference Facility recently moved to a new site. The new address is:

ERIC Processing and Reference Facility
1301 Piccard Drive, Suite 300
Rockville, MD 20850-4305

The phone and FAX numbers remain unchanged: 301/258-5500 and 301/948-3695, respectively.

The Facility is the central editorial and computer processing agency that coordinates document processing and database-building activities for ERIC. The Facility also performs acquisition, lexicographic, and reference functions, and maintains systemwide quality control standards.

VENDOR NEWS

From BRS:

- BRS Software Products has established an alliance with the Coalition for Networked Information. Through this alliance, the BRS/SEARCH full-text management and retrieval software will be mounted on the Coalition's Internet server, allowing users to search the Coalition's files using BRS/SEARCH over Internet.

  The Coalition, a joint project of the Association of Research Libraries, CAUSE, and EDUCOM, promotes the creation of and access to information resources in networked environments.

  For additional information on this or other BRS products, call 1-800-289-4277.

From DIALOG:

- Beginning November 1, 1991, charges for connect time to the ERIC database file on DIALOG increased. The hourly connect charge went up from $30.00 to $36.00, a change from $ .50 per minute to $ .60.

  The charge for online type and offline print of records remained at $ .10 and $ .15, respectively.

- The full text of approximately 700 of the 1,200 ERIC Digests in existence was loaded onto DIALOG in October 1991. The Digests are searchable in File 1, the same file as other ERIC documents and journal articles. To identify which Digests are available full-text, use DT=073, then use format 9 to display the full text. There is no additional charge for printing the Digests full-text.

  For additional information on DIALOG products and services, call 1-800-334-2564.

From OCLC:

- OCLC has introduced a powerful new online reference tool for end users. Called the FirstSearch Catalog, this is a low-cost, easy-to-use reference system to help library patrons search the OCLC Online Union Catalog, as well as a variety of reference databases, including ERIC, the GPO Monthly Catalog, and BIOSIS/FS.

  The FirstSearch interface was designed for end users and provides easy-to-follow directions for selecting the database to be searched and the type of search desired—subject, author, title, etc. Online help is extensive and easily available.

  FirstSearch is priced by the search, with an institution's per-search price determined by the total number of searches purchased. The per-search price ranges from $ .45, when 80,000+ searches are purchased, to $ .90, when 500 searches are purchased. Searches are sold in blocks of 500.

  The Catalog can be accessed using personal computers or OCLC workstations through OCLC dedicated lines, dial access, and Internet. It also may be offered via existing online public access catalogs (OPACs) or local area networks (LANs) if linked to OCLC with an OCLC Communications Controller.

  For information about this or other OCLC products, please call 1-800-848-5878.

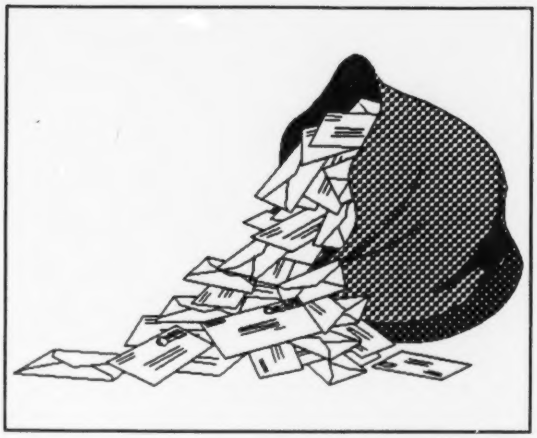
From SilverPlatter:

- SilverPlatter now is offering a new product called ERIC on Hard Disc. With ERIC on Hard Disc, there are no discs to exchange—users can search from 1966 to the present in a single step at speeds up to 10 times faster than CD-ROM searching.

Pricing for ERIC on Hard Disc is as follows:

	First Year	Renewal
Up to 15 users	$3,125	$1,750
Up to 30 users	$4,685	$2,625

For additional information about ERIC on Hard Disc, contact SilverPlatter at 1-800-336-4980.



Ask ERIC

Letters to the Editor

Do you have questions about the ERIC System or database? Take them straight to the source. Ask ERIC! Send questions to the *Interchange* Editor, c/o ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3172, or fax them to 301/251-5212.

Q ***Are there any plans to develop a video on how to use ERIC?***

A The ERIC Clearinghouse on Rural Education and Small Schools (ERIC/RC) has created a training package intended to help staff development trainers conduct a workshop introducing the use of the ERIC database to teachers and other staff of local education agencies.

Titled *A Workshop About ERIC: The Education Information Resource*, it contains a trainer's manual, participants' manual, transparency masters, and a videotape. The videotape gives background information about ERIC and demonstrates searching the database on CD-ROM. It is available from ERIC/RC for $35.00, postage paid. Call 1-800-624-9120 outside West Virginia, 1-800-344-6646 in West Virginia.

Q ***Is there a way to identify which ERIC documents are available on fiche and which ones aren't? Such a list would be helpful.***

A The way to identify which ERIC documents are available on microfiche is to look at the Level or "LV:" field. If it indicates Level one or Level two, the documents should be in the microfiche collection. Level three indicates reproduction permission was not given by the author; therefore, the item will not be on microfiche. Another easy way to check for microfiche availability is to check the Price or "PR:" field. If it says "EDRS Price - MF##" then the item is available in microfiche form from EDRS and can be ordered by calling 1-800-443-ERIC (3742).

Q ***Does ERIC offer training workshops or seminars? If so, how can users learn where and when sessions are held?***

A Most of the 16 Clearinghouses in the ERIC System offer training workshops and seminars. The Clearinghouses are given funding by the federal government to provide training for professional organizations within their subject scope, and for standing order customers within their assigned region. See page 8 for a list of Clearinghouses, the standing order customer states for which they are responsible, and a user services contact name and phone number.

Individual users who need assistance with searches can contact one of the Clearinghouses. Each Clearinghouse has user services and search personnel trained to help users choose the best search terms and strategies. Users should call the Clearinghouse which focuses on the subject of the search, or call ACCESS ERIC if unsure which Clearinghouse is appropriate. Some Clearinghouses charge fees for search services.

Another option is to contact the vendor of the product the users will be searching on. Most vendors who offer the ERIC database provide some form of training on their products, usually for a fee.

Finally, an experienced searcher can order the training package discussed in question #1 and use it to teach others.

ERIC COMPONENT SPOTLIGHT

The Interchange announces a new, regular feature. In each issue, we will "spotlight" two ERIC Components, providing a description of subject focus, personnel, and services provided, along with hours of operation, address, phone, and FAX numbers. We hope this will help readers gain an even better understanding of the ERIC System.

The ERIC Clearinghouse for Science, Mathematics, and Environmental Education (ERIC/SE)

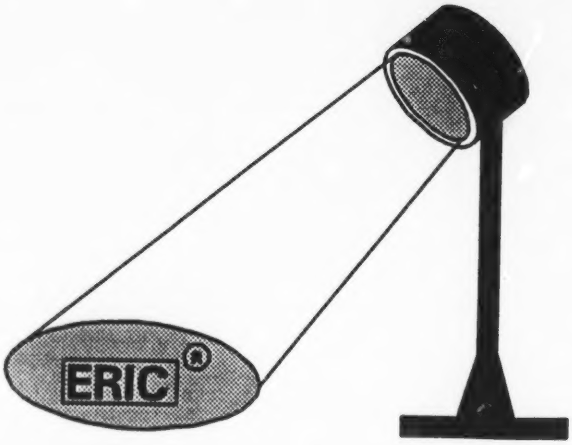
The ERIC Clearinghouse for Science, Mathematics, and Environmental Education recently underwent a number of staff and organizational changes. New staff members are: Dr. David L. Haury, Clearinghouse Director; Dawn D. Puglisi, Assistant Director and User Services Coordinator; and Gail L. Messineo, Database/Acquisitions Coordinator.

ERIC/SE will continue focusing on science, mathematics, and environmental education at all levels, and within these three broad subject areas, the following topics: teachers and teacher education; development of curricula and instructional materials; learning theory/outcomes; educational programs; engineering; research and evaluative studies; and application of educational technology and media.

Single copies of ERIC Digests, which are short research summaries on relevant topics, are available free from the Clearinghouse. Additional copies are $ .25. ERIC/SE will conduct database searches on a limited, for-fee basis, with a turnaround time of 5 to 7 working days. Staff are planning to develop prepackaged searches on specific topics.

Hours of operation for the Clearinghouse are Monday through Friday, 8:00 a.m. to 5:00 p.m. (EST). During the summer, these hours change to 7:30 a.m. to 4:30 p.m.

The Clearinghouse address and phone numbers are: The Ohio State University, 1200 Chambers Road, Room 310, Columbus, OH 43212-1792, 614/292-6717 (phone), 614/292-0263 (FAX).



Adjunct ERIC Clearinghouse on Consumer Education (ERIC/CN)

On January 2, 1992, the ERIC Clearinghouse on Adult, Career, and Vocational Education (ERIC/CE) and the National Institute for Consumer Education (NICE) established the Adjunct ERIC Clearinghouse on Consumer Education (ERIC/CN).

The purpose of the adjunct clearinghouse is to collect and disseminate information on consumer education, including decisionmaking, resource management, and citizen participation. The adjunct clearinghouse will enhance and augment ERIC's traditional coverage of the area of consumer education.

Clearinghouse staff will be involved in identifying and selecting materials in consumer education for entry into the ERIC database. They also will collaborate with ERIC/CE in publication development and dissemination activities. CD-ROM searches of consumer education information in ERIC will be provided to users for a fee.

ERIC/CN's hours are 8:00 a.m. to 5:00 p.m., Monday through Friday (EST). The adjunct clearinghouse staff includes Rosella Bannister, Director, and Patricia Bonner, Associate Director.

The Adjunct ERIC Clearinghouse on Consumer Education can be reached by mail, phone, and FAX at National Institute for Consumer Education, 207 Rackham Building, West Circle Drive, Eastern Michigan University, Ypsilanti, MI 48197, 313/487-2292 (phone), 313/487-7153 (FAX).

User Services Contacts at ERIC Components

The following is a list of the ERIC System Components and a user services contact name and phone number for each. Each Component is responsible for maintaining relationships with standing order customers (SOCs) in specific states, as indicated below. SOCs are organizations with standing orders for the ERIC microfiche collection.

ERIC COMPONENT	PHONE NUMBER	NAME	STANDING ORDER CUSTOMER STATES
ACCESS ERIC	800/USE-ERIC	Kristine Kaplan	N/A
ERIC Facility	301/258-5500	Gail Mathews	N/A
EDRS	800/443-ERIC	Lisa Douds	N/A
Clearinghouses:			
Adult, Career, & Vocational Education (CE)	800/848-4815	Judy Wagner	AL, KY, MS, TN
Counseling and Personnel Services (CG)	313/764-9492	Caroline Mohai	US: MI, MN, ND Can: Manitoba, Ontario
Educational Management (EA)	503/346-5043	Mary Lou Finne	US: AK, HI, ID, MT, OR, WA Can: Alberta, British Columbia, Saskatchewan
Elementary and Early Childhood Ed. (PS)	217/333-1386	Norma Howard	IL, IA, KS, MO, NE, SD
Handicapped and Gifted Children (EC)	703/264-9474	Barbara Sorenson	FL, GA
Higher Education (HE)	202/296-2597	Beth Allen	DE, PA, Puerto Rico, Virg. Islands
Information Resources (IR)	315/443-3640	Nancy Preston	US: NY (Upstate) Can: New Brunswick, Quebec, Newfoundland, Nova Scotia
Junior Colleges (JC)	213/825-3931	Diane Hirshberg	CA, NV, Guam
Languages and Linguistics (FL)	202/429-9551	Craig Packard	NC, SC, VA
Reading and Communication Skills (CS)	812/855-5847	Gail Londergan	IN, WI
Rural Education and Small Schools (RC)	800/624-9120	Berma Lanham	NM, TX, WV
Science, Math. & Environmental Ed. (SE)	614/292-6717	Dawn Puglisi	AR, LA, OH
Social Studies/Social Science Ed. (SO)	812/855-3838	Vickie Schlene	AZ, CO, OK, UT, WY
Teacher Education (SP)	202/293-2450	Dorothy Stewart	DC, MD
Tests, Measurement, and Evaluation (TM)	202/342-5060	Lynn Davey	MA, NJ, RI
Urban Education (UD)	212/678-3433	Karen Wallace	CT, ME, NH, NY (Downstate), VT
Adjunct Clearinghouses:			
Art Education (AR)	812/855-3838	Kevina Maher	N/A
Chapter 1 (Compensatory Education)	317/244-8160	Mary Quilling	N/A
Consumer Education (CN)	313/487-2292	Patricia Bonner	N/A
Literacy Education (LE)	202/429-9292	Marilyn Gillespie	N/A
United States-Japan Studies (JS)	812/855-3838	Yasemin Oguzertem	N/A

Call 1-800-USE-ERIC

NEW ERIC PUBLICATIONS AND PRODUCTS

The ERIC Clearinghouses and Support Components regularly develop new products and publications which guide users through the ERIC System or treat specific education issues. *The Interchange* is pleased to announce the following items:

From ACCESS ERIC

- ***Striving for Excellence: The National Education Goals***
  $5.00, prepaid
  This publication consists of 30 separate ERIC Digests developed by the ERIC Clearinghouses and grouped around the goal areas. It summarizes research and program findings related to school readiness, high school completion, student achievement and citizenship, science and mathematics, adult literacy and lifelong learning, and safe, disciplined, and drug-free schools. Materials in the 72-page packet may be reproduced.

- ***Catalog of ERIC Clearinghouse Publications***
  $8.00, prepaid
  This catalog offers a complete listing of titles currently available from the ERIC System, many of which are free. Includes ordering information and a comprehensive subject index indicating which Clearinghouse published each title.

- ***1992 ERIC Calendar of Education-Related Conferences***
  $15.00, prepaid
  This directory includes information on 578 international, national, state, regional, and local education-related conferences. Designed to help practitioners stay abreast of events scheduled during 1992. Features four indexes which allow users to identify conferences of interest quickly and easily:

  — Conference Date and Name Index
  — Sponsor and Conference Name Index
  — Geographic Index
  — Subject Index

- ***The ERIC Review***
  Free; 3 issues per year
  This journal provides education practitioners with education research and news they can use. It is designed to help the education community stay informed of recent research findings and critical trends and issues in education. It also announces important ERIC System developments and new products and services as they become available.

  Upcoming issues will focus on school readiness/early childhood education, school-community-business partnerships, and educational technology. For a free subscription, call ACCESS ERIC at 1-800-USE-ERIC (873-3742).

- ***The ERIC Directory of Education-Related Information Centers***, 1992
  $15.00, prepaid
  This directory lists 350 education-related organizations providing services such as information synthesis and dissemination, online searching, outreach, technical assistance, reference, and referral to the general public. Allows users to identify resources quickly and easily by subject, organization name, and geographic location. Lists each organization's services, topics of focus, intended audience, and contact person.

- ***The Directory of ERIC Information Service Providers***, 1992
  Free, available spring 1992
  This directory lists 1,000 organizations that provide access for individuals to the ERIC database and related resources. Designed to help users quickly locate nearby organizations where ERIC resources and related services are available. Organized by state, and then by city, this directory also is indexed alphabetically by service provider name. Each entry includes the organization name, address, phone, and FAX, contact person, services offered, type of collection and equipment, audiences served, and access procedures.

These publications are available from ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3172, 1-800-USE-ERIC (873-3742). Check, money order, Visa, or MasterCard accepted. Purchase orders are accepted only from universities and state and local agencies. Add $2.00 per item for shipping to Canada and $4.00 per item for shipping to other foreign countries.

From the ERIC Processing and Reference Facility

- ***ERIC Clearinghouse Publications, 1990. An Annotated Bibliography of Information Analysis Products and Other Major Publications of ERIC Clearinghouses, January–December 1990***
  Carolyn Weller and Ted Brandhorst, Eds.
  July 1991; ED 335 060
  This annotated bibliography provides citations, abstracts, and indexes for the 355 publications produced by the 16 ERIC Clearinghouses in 1990. These publications consist of ERIC Digests, bibliographies, reviews, and information syntheses of various types. Subject, author, and institution indexes are provided.

This bibliography is available from the ERIC Document Reproduction Service (EDRS) in microfiche for $1.16 or paper copy for $16.00, not including postage. Contact EDRS at 7420 Fullerton Road, Suite 110, Springfield, VA 22153-2852, 1-800-443-ERIC (3742) for additional information.

From ORYX Press

- ***ERIC Identifier Authority List (IAL)***
  Carolyn Weller and Jim Houston
  $55.00 U.S.; $66 outside of U.S.
  The updated *ERIC Identifier Authority List* is now available in hardcover. This publication can help ERIC users conduct precise, productive searches, resulting in reduced online search time.

  With a total of 43,196 identifiers, the *IAL* includes 2,500 new terms—and 470 purged terms— since the last update of the vocabulary in June 1987. Usually identifying specific entities (the name of a particular project, piece of legislation, person, organization, or new concept), identifiers appear in the literature and represent language, topics, and emerging trends in education.

  The terms in the *ERIC Identifier Authority List* are used to achieve standardization in indexing and ease in searching the ERIC database. It is a companion to the *Thesaurus of ERIC Descriptors*, which also is published by Oryx Press. The *IAL* is indexed both alphabetically and by category and also can be employed as a research tool in free-text searching.

This publication is available from Oryx Press, 4041 North Central Avenue, Suite 700, Phoenix, AZ 85012, 1-800-279-ORYX (6799).

From the U.S. Department of Education

- ***Recent Publications of the Department of Education***
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  This publication announces the availability of selected new documents, produced or sponsored by the Department of Education, on topics of national importance. Each entry lists author, corporate source, publication date, sponsoring agency, report number, and availability. The table of contents is organized by topic, with cross-references for materials that address multiple topics. For each topic area, a title list also is provided.

This publication is available from the U.S. Department of Education's Office of Educational Research and Improvement. Contact Greg Dennis at 202/219-1528 to request a copy.

- ***Public Libraries in 50 States and the District of Columbia: 1989***
  Free
  In order to meet policymakers' needs for valid, reliable, and timely statistics to use when determining the investment of public resources in library development and operations, the National Center for Education Statistics (NCES) began to develop and implement a comprehensive national system of library data collection relating to the status, condition, and progress of libraries in the U.S. This report is based on information from the 1989 Federal-State Cooperative System for Public Library Data.

  In the future, NCES also will publish data for state library agencies, cooperatives, regional libraries, and federations. More periodic publication of data on academic libraries and school library media centers is planned.

This publication is available from the U.S. Department of Education, Education Information Branch, Office of Educational Research and Improvement, 555 New Jersey Avenue, NW, Room 300, Washington, DC 20208-5641, 800/424-1616.

From the ERIC Clearinghouse on Elementary and Early Childhood Education (PS)

- *Child Care Resource and Referral Agencies*
  Dan Bellm
  Free ERIC/PS Digest; EDO-PS-91-10
  This ERIC Digest defines what a child care resource and referral agency is, discusses the development of these organizations, explains what they can do for parents and child care providers, and lists places to write for additional information.

- *Resources for Parent Educators*
  Free ERIC/PS Resource List
  This is a partial list of documents and journal articles in ERIC that discuss various aspects of parental involvement in the education of children.

These resources are available from the ERIC Clearinghouse on Elementary and Early Childhood Education, University of Illinois, College of Education, 805 West Pennsylvania Avenue, Urbana, IL 61801-4897, 217/333-1386.

From the ERIC Clearinghouse on Higher Education (HE)

- *The National Teaching and Learning Forum*
  Newsletter; 6 issues per year
  $39.00 single subscription; discount for additional subscriptions
  This newsletter is designed to promote cross-disciplinary dialogue on the dynamics of teaching and learning in the college classroom. It is targeted to faculty and administrators engaged in exploring diverse approaches to the teaching and learning challenges of the 1990s.

- *Proprietary Schools: Programs, Policies, and Prospects*
  John B. Lee and Jamie P. Merisotis
  $17.00, Number 1-878380-02-8
  This is the most comprehensive examination available on the proprietary school sector. It presents the history and present state of private schools, their pros and cons, basic information about the schools, programs, and their students, and also suggests potential avenues for future research.

These publications are available from the ERIC Clearinghouse on Higher Education, One Dupont Circle, Suite 630, Washington, DC 20036-1183, 202/296-2597.

From the ERIC Clearinghouse on Information Resources (IR)

ERIC DIGESTS

- *Technology and Equity*
  Delia Neuman
  December 1991
  Free ERIC/IR Digest; EDO-IR-91-8
  This Digest discusses technological equity, focusing on computer access for students at different achievement and socioeconomic levels. A list of references and additional readings is included.

- *Psychological Dimensions of User-Computer Interfaces*
  Gary Marchionini
  October 1991
  Free ERIC/IR Digest; EDO-IR-91-5
  This Digest defines and discusses human-computer interfaces, and presents principles for, and trends in, interface design.

- *Trends & Issues in Library & Information Science 1990*
  Mary Alice Brennan
  November 1991
  Free ERIC/IR Digest; EDO-IR-91-7
  This Digest is based on a 67-page volume of the same title by Michael B. Eisenberg, et. al. (Available for $9.50 from ERIC/IR). Discusses some of the top trends found through a content review of the professional literature in the field of library and information science. Focuses on two "megatrends" and six trends. Includes a selected bibliography.

- *Interactive Multimedia Computer Systems*
  Eileen E. Schroeder
  November 1991
  Free ERIC/IR Digest; EDO-IR-91-6
  This Digest defines interactive multimedia, lists and discusses their components, advantages, and problems, gives examples, and hints at the future of this rapidly advancing technology. A list of references is included.

MINI-BIBS

Mini-Bibs are short, selective bibliographies of documents and journal articles on a specific topic in the ERIC database. The bibliographic citation, an abstract, and order information are included for each item.

- *Copyright Issues for Schools and Libraries: A Select ERIC Bibliography*
  Prepared by Nancy R. Preston
  December 1991
- *Library Services & Cultural Diversity: A Select ERIC Bibliography*
  Prepared by Nancy R. Preston
  December 1991

These publications are available from the ERIC Clearinghouse on Information Resources, 030 Huntington Hall, Syracuse University, Syracuse, NY 13244-2340, 315/443-3640.

From the ERIC Clearinghouse on Rural Education and Small Schools (RC)

- *A Workshop About ERIC: The Education Information Resource*
  Todd Strohmenger and Berma Lanham
  1991; $35.00
  This is a training package intended to assist staff development trainers conduct workshops introducing the use of the ERIC database to teachers and other staff. Contains a trainer's manual, participants' manual, transparency masters, and a videotape giving background about ERIC and demonstrating searching the database on CD-ROM.
- *A Parent's Guide to the ERIC Database*
  Craig Howley, Phyllis Stowers, and Pat Cahape
  1992; $10.00
  This updated version of the popular ERIC/RC guide explains how parents can use ERIC to find answers to their questions about schooling. Written in everyday language, it describes available publications, presents how-to information, and supplies user-friendly knowledge about the ERIC System.
- *The Distance Education Handbook: An Administrator's Guide for Rural and Remote Schools*
  Barker
  1992; $10.00
  This handbook helps administrators size up complex issues in a growing field. In simple language, it explains types of technology, costs, and advantages and disadvantages and reports evaluation results. Includes examples of programs and a comparison of large and small options.
- *ERIC for Teachers in Training*
  Craig Howley
  1989; $10.00
  This package was developed especially for teacher educators. It includes an instructor's manual, student's manual, transparency masters, and an assessment instrument.

These materials are available from the ERIC Clearinghouse on Rural Education and Small Schools, Appalachia Educational Laboratory, Inc., P.O. Box 1348, Charleston, West Virginia 25325-1348, 1-800-624-9120, outside WV; 1-800-344-6646 in WV. Prices include postage and handling fees.

From the ERIC Clearinghouse on Urban Education (UD)

- *Highly Mobile Students: Educational Problems and Possible Solutions*
  June 1991
  Free ERIC/UD Digest; EDO-UD-91-3
  Student mobility is changing the way schools view and handle their student populations. This ERIC Digest discusses causes of mobility, some of the problems it creates for schools, and possible solutions to the problem.
- *Conflict Resolution Programs in Schools*
  June 1991
  Free ERIC/UD Digest; EDO-UD-91-4
  Conflict is particularly pervasive in urban schools as a result of their size, limited resources, and diverse populations. This Digest defines and discusses the value, effectiveness, and future of conflict resolution and gives an example of such a program. Resource and reference lists are included.

- *Urban School Restructuring and Teacher Burnout*
  July 1991
  Free ERIC/UD Digest; EDO-UD-91-5
  This ERIC Digest considers the impact of several components of school restructuring on teacher burnout.

These Digests are available from the ERIC Clearinghouse on Urban Education, Teachers College, Columbia University Institute for Urban and Minority Education, Main Hall, Room 300, Box 40, 525 West 120th Street, New York, NY 10027-9998, 212/678-3433.

The *ERIC Users' Interchange* is published biannually by ACCESS ERIC.

Editor .... Kristine D. Kaplan

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Look for the next issue in September 1992.

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ERIC DIGEST

December 1991

EDO-IR-91-9

The National Research and Education Network (NREN): Update 1991

By Ann P. Bishop

This digest updates *The National Research and Education Network (NREN): Promise of a New Information Environment*, by Ann P. Bishop.

This digest reports on the current status of Federal policy initiatives related to the National Research and Education Network (NREN) and discusses trends and issues in electronic networking that are of interest to members of the education and library communities. The NREN is envisioned as an expansion and enhancement of the existing U.S. Internet, the collection of interconnected computer networks that is currently used by over one million United States researchers, educators, students from K-12 to postgraduate levels, and others.

Status of Federal NREN Initiatives

Legislation authorizing the creation of what has been referred to as an electronic "information superhighway" was first introduced by Senator Albert Gore in 1988. The latest version of the NREN legislation, called the High-Performance Computing Act of 1991 (P.L. 102-194), finally passed both houses of Congress on November 22, 1991 and was signed into law by the President on December 9, 1991. In addition to establishing the NREN, the Act calls for the implementation of a government research and development program in advanced computing technology and applications. It serves, for the most part, to mandate goals and strategies that are already being pursued in the executive branch under the name of the High Performance Computing and Communications (HPCC) Program. The HPCC Program is outlined in a 1991 report entitled *Grand Challenges: High Performance Computing and Communications*, issued by the Office of Science and Technology Policy.

The intent of both the legislative and executive branch initiatives is to improve the information, computing, and communications infrastructure for the country's researchers and educators, while at the same time promoting the development of new computing and communications technologies. The government hopes that such efforts will enhance national productivity and competitiveness as well as speed scientific and technical advances in a number of fields. Important features of the Federal government's plans for funding, creating, and managing the NREN include:

- Appropriations of at least $1 billion to implement a high-speed network linking educational and research institutions in all fifty states in order to facilitate communication, computation, and access to information resources and research equipment;
- Cooperation with the private sector in developing NREN technologies and providing electronic information products and services;
- Designation of the National Science Foundation as lead agency for providing networking infrastructure support and information on NREN access and use;
- Federal assistance for schools and libraries unable to take advantage of private sector NREN connections;
- Provision of information services related to the NREN—such as directories, user training, and access to commercial information services—and technology designed to support computer-based collaboration;
- Use of the NREN for improving the dissemination of information stored in government databases;
- Development of standards related to networking and of mechanisms for ensuring intellectual property protection, assessing and collecting user fees, guiding the eventual transition to commercial use, and maintaining security and privacy;
- Recognition of the need to educate more students in library and information science, as well as in computing and computational disciplines; and
- Establishment of an advisory committee—to include representatives from industry, network providers, and research, education, and library communities—whose mission is to assess Federal initiatives in high-performance computing and communications.

Government plans for the NREN have evolved over the past year or so to include a much greater emphasis on educational and library perspectives. Due in large part to successful lobbying efforts by organizations and coalitions representing these communities, NREN policy statements contain more language on, for example, the importance of providing access for educational institutions of all levels and locations, the need to promote shared access to information resources by linking users to libraries and databases, and the importance of promoting NREN applications such as digital libraries and distance education.

It should be remembered that both legislative and executive policy statements only outline, in broad strokes, government plans and strategies related to the NREN. Within this framework, a number of important controversies remain to be resolved, some of which are suggested by the list of NREN policy features presented above. Individual agencies and other key players will make specific decisions that will affect the actual use of the NREN. The National Science Foundation, for example, will be issuing new contracts in 1992 for both the management of NSFNET (a high-speed national network that serves as the backbone to the U.S. Internet) and the provision of network information services. In addition, it will be chiefly responsible for deciding how funds for NREN connections will be allocated among individuals, institutions, and various network service providers.

Growth of Network Use in the Education and Library Communities

It is clear that the education and library communities are continuing to expand their use of electronic networks. Researchers, students, librarians, and educators subscribe to electronic conferences, newsletters, and journals on a wide range of topics of concern to them in their work. They use electronic mail to communicate with remote colleagues; file transfer to acquire a variety of public domain information resources, such as software and full-text files; and remote login to access supercomputers. In addition, members of the library and education communities are contributing to the creation of electronic information resources and services. For example, many library catalogs and databases created originally for local use are currently available over the Internet. Further, some librarians and educators are an important source of network training and support for their clientele.

As new users and applications are brought online, the potential of computer networks to dramatically transform the nature of education and scholarship is becoming more apparent. In some cases, computer networks are used to make existing processes more efficient, e.g., putting library card catalogs online and disseminating memos from teachers to students. But in other cases, networking is being used to create new relationships, processes, services, and products. For example, students may use electronic networks to learn another language by engaging in electronic conversations with distant peers who are native speakers, and libraries may create and "publish" electronic information resources over the network to an audience far broader than their traditional patron group. Both individuals and institutions are reexamining their goals, capabilities, roles, and responsibilities in learning and scholarly communication as their experience with the use of computer networks grows. Development of the NREN, obviously, has the potential to expand even further the use of computer networking services and products in schools, universities, and libraries.

Conclusions

Even with the passage of NREN legislation, the transition to a networked information environment will not be easy. Educational and research institutions, libraries, and publishers are faced with difficult social, economic, legal, ethical, and management issues in their attempts to incorporate the provision and use of network services within existing organizational structures and operations. With networking policies, technologies, and user expectations in seemingly constant flux, these issues become even more difficult to resolve. Important policy changes include the recent Supreme Court decision allowing regional Bell operating companies to begin providing commercial information services. Technology trends that could have a tremendous impact on networking include the proliferation of multimedia applications and the development of standards and user-friendly interfaces for information search and retrieval.

Further Reading

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This digest was prepared for the ERIC Clearinghouse on Information Resources by Ann P. Bishop, Assistant Professor, Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign.

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ERIC® USERS' INTERCHANGE

September 1992

SPECIAL INTEREST NEWS FOR *INTERCHANGE* READERS

Myths and Realities about ERIC

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MYTH: ERIC is just a database.

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MYTH: Submitting a document to ERIC is complex and prevents the author from publishing it elsewhere.

REALITY: It is easy to submit your work to ERIC—just send a copy to the ERIC Clearinghouse that covers the topic of the document. If you're not sure what subject it falls under, send it to the ERIC Processing and Reference Facility, 1301 Piccard Drive, Suite 300, Rockville, MD 20850-4305.

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The *ERIC Users' Interchange* was prepared by ACCESS ERIC, a project of Aspen Systems Corporation under contract #RR92024001 for the Office of Educational Research and Improvement, U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express their judgment in professional and technical matters. Points of view or opinions do not necessarily represent official Department of Education positions or policies. All questions, correspondence, and contributions should be directed to the Editor of the *Interchange*, ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3172, 1-800-LET-ERIC (538-3742).

MYTHS AND REALITIES, from p. 1

Several brochures, including *All About ERIC*, *A Pocket Guide to ERIC*, and *Submitting Documents to ERIC* provide complete directions and addresses. They are all available, at no cost, from ACCESS ERIC (1-800/LET-ERIC). The only paperwork required is a reproduction release form. This is available in *Submitting Documents to ERIC* and every issue of *Resources in Education* (RIE); it also can be requested from any ERIC Component. While the release gives ERIC permission to abstract, index, and reproduce your work, no copyright is involved—you remain free to submit your work to any journal or publisher.

MYTH: ERIC produces only one database.

REALITY: While the bibliographic "ERIC Database" remains ERIC's best-known product, ERIC also produces four reference and referral databases. Each is available online or in print copy. The reference and referral databases include:

- ERIC Digests Online: Full-text collection of approximately 850 short syntheses of current research, educational trends, and other topics;
- ERIC Information Service Providers: Listing of 1,000 institutions around the world that provide ERIC services, including database searching and access to microfiche collections;
- Education-Related Information Centers: Descriptions of 350 institutions, associations, and clearinghouses that provide education materials or services to the public; and
- Calendar of Education-Related Conferences: Listing of 525 international, national, state, and regional events.

Call ACCESS ERIC, 1-800/LET-ERIC, for further information.

MYTH: The ERIC database contains materials of interest only to researchers.

REALITY: ERIC has committed itself to reaching audiences that include practitioners, policymakers, and parents. In the last 12 years, ERIC has acquired and indexed more than 28,000 documents classified as Project/Program Descriptions, more than 17,500 Teaching Guides and 15,500 Guides-Non-Classroom (for support staff), and more than 7,000 Instructional Materials.

Analyses of the literature added to the database each year confirm that approximately 30 percent is practitioner-oriented. In addition, ERIC soon will enter information about each nationally validated National Diffusion Network (NDN) program into the ERIC Database.

MYTH: ERIC accepts everything, regardless of quality.

REALITY: ERIC has strict quality-control procedures that govern the selection of documents. These procedures are articulated in the ERIC Processing Manual and must be followed by each Clearinghouse.

Eleven content criteria guide the selection of materials: contribution to knowledge, relevance, innovation, effectiveness of presentation, responsiveness to current priorities, timeliness, authority, audience, balance, stance on minority-ethnic-gender concerns, and treatment of material with sexual content. In addition, other criteria pertain to legibility, reproducibility, and availability. As a result of applying the criteria, last year ERIC rejected approximately 32 percent of the documents submitted.

EDRS Kicks Off Corporate 2000 Campaign

The ERIC Document Reproduction Service (EDRS) recently initiated a marketing campaign aimed at overcoming the shortage of funding for library acquisitions in many educational institutions. "Corporate 2000," EDRS's America 2000 initiative, assists schools seeking funding for ERIC resources from businesses and private foundations.

The program first matches participating schools with businesses and/or private foundations that are willing to donate funding for the purchase of an ERIC microfiche collection. Once this research is complete, EDRS assists the schools in developing grant requests to obtain ERIC resources.

For additional information about this program or other EDRS services, contact Nancy Johnson, Marketing Representative at 1-800/443-ERIC (3742) or 703/440-1400.

Free National Education Goals Packets Available

ACCESS ERIC is distributing **free** National Education Goals packets that provide information about resource organizations and ERIC publications related to each of the goal areas: school readiness, school completion, student achievement and citizenship, math and science education, adult literacy and lifelong learning, and safe, disciplined, and drug-free schools. For packets on one or more topics, call ACCESS ERIC at 1-800/LET-ERIC.

ERIC Clearinghouses and Support Components Accessible via The Internet

The ERIC System is continually looking for ways to become more accessible to its users. Taking advantage of online networks is the latest step for System members. Following are the Internet addresses for the ERIC Components:

Federal Sponsor:

Educational Resources Information Center (ERIC)
U.S. Department of Education
Office of Educational Research and Improvement
v5a@cu.nih.gov

Clearinghouses:

Adult, Career, and Vocational Education
ericacve@magnus.acs.ohio-state.edu

Counseling and Personnel Services
chris.eldred@um.cc.umich.edu

Educational Management
ppiele@oregon.uoregon.edu

Elementary and Early Childhood Education
ericeece@ux1.cso.uiuc.edu

Handicapped and Gifted Children
ericec@gwuvm.gwu.edu

Higher Education
judieric@gwuvm.gwu.edu

Information Resources
eric@suvm.acs.syr.edu

Junior Colleges
eeh3rie@mvs.oac.ucla.edu

Languages and Linguistics
cal@guvax.georgetown.edu

Reading and Communication Skills
londer@ucs.indiana.edu

Rural Education and Small Schools
u56d9@wvnvm.wvnet.edu

Science, Mathematics, and Environmental Education
dpuglisi@magnus.acs.ohio-state.edu

Social Studies/Social Science Education
henson@ucs.indiana.edu

Teacher Education
ericsp@gwuvm.gwu.edu

Tests, Measurement, and Evaluation
nu_erictm@cuavax.dnet.cua.edu

Urban Education
lry2@cunixf.cc.columbia.edu

Adjunct Clearinghouses:

Art Education
henson@ucs.indiana.edu

Consumer Education
cse-bonner@emunix.emich.edu

Literacy Education
cal@guvax.georgetown.edu

U.S.-Japan Studies
oguzerte@ucs.indiana.edu

Support Components:

ACCESS ERIC
acceric@gwuvm.gwu.edu

ERIC Document Reproduction Service
edrs@gwuvm.gwu.edu

ERIC Processing and Reference Facility
ericfac@gwuvm.gwu.edu

Oryx Press
arhjb@asuvm.inre.asu.edu

VENDOR NEWS

From BRS:

- For information on BRS products and services, call 1-800/289-4277.

From DIALOG:

- In the October 1992 issue of *DIALOG Chronolog*, DIALOG Information Services, Inc. is announcing a reduction in the price for DIALOG OnDisc ERIC. The price changes are as follows:

	New Price	Old Price
Current Product (1983 to present) Product code 2001101	$650	$795
Complete Product (1966 to present) Product code 1001101	$1,195	$1,295
Renewal on either	$645	$750

- In 1991, Dialog released DIALOG OnDisc software for use on Apple Macintosh computers. The software offers the following features: Boolean search capability, using a menu interface; automatically expanded indexes; predefined and user-defined output formats; a direct entry screen where search terms can be entered using proximity indicators; related terms in databases with thesauri; saving and printing search results in a variety of formats.

  System requirements include a Macintosh computer, Mac Plus or greater, with an internal or external hard disk; System version 6.0.2 or later and Finder version 6.1 or later; and at least 1 megabyte of RAM and 1 megabyte of free space on the hard disk. The price for the DOS and Macintosh versions are the same.

For additional information on DIALOG products and services, call 1-800/334-2564.

From OCLC:

- In its publication *OCLC Reference News* (May/June 1992, p. 9), OCLC announced it is making the FirstSearch Catalog more widely available to the library community by offering two purchase options:

  The FirstSearch Group Purchase Option allows libraries to form groups and buy searches together. Searches must be bought in blocks of 500 and can be refunded or carried over at the end of the OCLC fiscal year. Prices range from 50 to 70 cents per search, depending on group size and number of searches purchased.

  The following conditions apply:

  - Each group member must purchase at least one block of searches;
  - A group must have at least three member libraries, but no more than 100;
  - A library can belong to only one group at a time;
  - Once a group is formed, new members cannot be added during the fiscal year;
  - Groups must reapply for the group plan each year; and
  - OCLC nonmembers must pay a $100 annual fee to participate.

  The Nonmember Purchase Option enables libraries to subscribe to FirstSearch whether or not they use OCLC services or contribute to the OCLC Online Union Catalog. A $100 annual fee is charged nonmembers, in addition to the cost of their purchase for access to FirstSearch.

For more information about these or other OCLC products and services, call 1-800/848-5878.

From SilverPlatter:

- SilverPlatter Information will be adding the full text of ERIC Digests to the ERIC Database. ERIC Digests are one- to two-page full-text syntheses prepared by the ERIC Clearinghouses that are targeted specifically to teachers, administrators, and other practitioners. They are designed to provide an overview of information on a given topic, and provide references to items with more detailed information. Digest abstracts are currently in the database, but without the full text of the actual documents. Look for the full text of more than 850 Digests to be available in the second quarter of 1993.

For more information on this or other SilverPlatter products, call 1-800/521-0574 or 703/527-4780.

New Project Director at EDRS

Peter Dagutis was named the new Project Director for the ERIC Document Reproduction Service, operated by Cincinnati Bell Information Services (CBIS). Formerly the Manager of Production Operations, he has directed EDRS since John Gracza's departure in mid-June. Mr. Dagutis has more than 18 years experience in the micropublishing industry with organizations producing products and indexes of specifications and standards for the engineering disciplines. A graduate of The University of Michigan with a BSA in operations management, he has been with CBIS for 3 years.

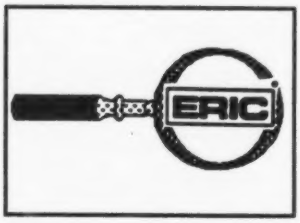
ERIC User Survey

The ERIC System wants to be responsive to the education information needs of current and potential users. ACCESS ERIC, with oversight from a systemwide ERIC Assessment Task Force, recently conducted a survey to assess the education information needs of diverse user groups, including librarians, university professors and researchers, teachers, and administrators.

More than 1,000 respondents completed a 21-question survey about their need for education information, their use of ERIC, their evaluation of ERIC services and products, and their suggestions for system improvement and expansion. The survey included objective questions, rating scales, and open-ended questions.

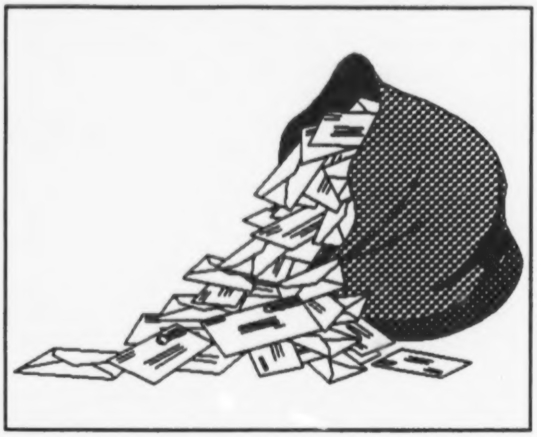
Among the key findings of the survey were the following:

- Survey respondents showed a high degree of familiarity with ERIC: 72 percent had used ERIC, 12 percent had heard of ERIC but not used it, and 16 percent had neither used nor heard of ERIC.
- Survey respondents who used ERIC generally rated it very highly: 96 percent indicated that ERIC met their basic education information needs, and 90 percent felt ERIC was accessible when they needed education information.
- The two most common ways for respondents to learn about ERIC were through courses or inservice training (identified by 52 percent of the respondents) and through the library (identified by 26 percent).
- Of respondents who rated ERIC online search services, 71 percent described them as "Very Helpful," and 17 percent described them as "Somewhat Helpful." CD-ROM search services received a "Very Helpful" rating from 57 percent of respondents, and a "Somewhat Helpful" rating from 10 percent.
- Journal articles were the most frequently identified type of information obtained from the ERIC database. Following in descending order were unpublished documents, conference papers, literature reviews, and curriculum materials.
- The majority of respondents stated that ERIC database information was most useful to them for research activities. Nine percent used ERIC information primarily for administrative decisions, 7 percent used ERIC for curriculum development, and 4 percent used it primarily for identifying instructional techniques.
- Among all respondents, *Current Index to Journals in Education (CIJE)* was a slightly more familiar resource than *Resources in Education (RIE)*: 71 percent had used *CIJE* and 65 percent had used *RIE*.
- Seventy-eight percent of the librarians found the *Thesaurus of ERIC Descriptors* a "Very Helpful" search tool.



- Approximately half of the respondents indicated that more comprehensive coverage of journals and full-text retrieval capabilities were a "Must" for the ERIC System.
- School administrators and college and university professors were the user groups most likely to use the ERIC Clearinghouses and ERIC Document Reproduction Service.
- ERIC users and ERIC nonusers appear to have different education information needs: current users indicated that synopses of education research and research projects/papers were their most important information needs, while nonusers, who were mostly teachers, requested practical ideas for teaching and considered research papers their least significant education need.

We thank all the ERIC Users' Interchange readers who responded to the survey for their input. Copies of Report: ERIC User Survey will be available from the ERIC Document Reproduction Service in Winter 1993.



Ask ERIC

Letters to the Editor

This issue's "Ask ERIC" questions relate to the ERIC Assessment Survey.

Q Librarians have used ERIC for years. What did your survey tell you about our familiarity with the System?

A Librarians were the user group with the highest degree of ERIC recognition–98 percent of the librarians who responded had heard of ERIC, and 93 percent of those had used the database. Surprisingly, librarians were the user group that used the ERIC Clearinghouses the least—only 38 percent of the librarians, as compared with 72 percent of the school administrators, 71 percent of the university professors and education researchers, and 41 percent of the teachers, had used the Clearinghouses.

Q What do the Clearinghouses have to offer librarians and other information service providers?

A Clearinghouse personnel identify, select, and abstract documents and journal articles that are added to the ERIC database. They also offer user services such as search consultations and free and low-cost publications, including ERIC Digests, bibliographies, and information analyses. The free publication, *A Pocket Guide to ERIC*, gives contact information for the 16 ERIC Clearinghouses and 5 Adjunct Clearinghouses. Call ACCESS ERIC at 1–800/LET–ERIC for a copy.

Q Survey respondents had a chance to make recommendations for improving ERIC. What kinds of changes did they recommend?

A The top 3 changes recommended by survey respondents were to add new technology such as full-text delivery on CD-ROM, update the database more frequently, and provide faster searching capabilities. Librarians also suggested developing alternatives to microfiche and making ERIC training materials widely available.

Q What suggestions for product development did librarians make?

A Selecting from a list of possible information products listed in the survey, librarians expressed the most interest in annotated bibliographies of current topics in education. They also asked for more in-depth information and ready database searches on current education topics.

Q How will the survey results be used?

A The survey provides a snapshot of ERIC System users and nonusers and their education information needs. Respondents provided valuable input for improving the ERIC System and increasing its responsiveness to users. The ERIC System is using this input to implement system improvements and plan future directions responsive to user wants and needs.

ACCESS ERIC Seeks Quick Reference Sheets

ACCESS ERIC is collecting examples of quick reference sheets on searching ERIC online, on CD-ROM, and in paper and microfiche form to use in developing a comprehensive but concise searching aid. If you are interested in sharing your "cheat sheets," please send or fax them to: ACCESS ERIC, 1600 Research Blvd., 3C, Rockville, MD 20850–3172, 301/251–5767 (FAX).

ERIC COMPONENT SPOTLIGHT

In this issue, we "spotlight" two ERIC Components, providing a description of each one's subject focus, services, hours of operation, address, phone and FAX numbers, and Internet address.

The ERIC Clearinghouse on Information Resources (ERIC/IR)

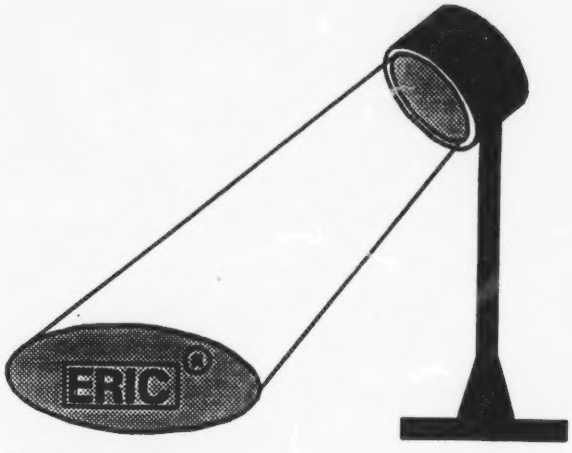
The ERIC Clearinghouse on Information Resources is the education community's connection to library and technology information. Hosted by Syracuse University, one of the leading institutions in the education and information technology field, the Clearinghouse is headed by Dr. Michael Eisenberg.

ERIC/IR focuses on the following subject areas:

- Educational technology and library and information science at all levels;
- Instructional design, development, and evaluation within educational technology, along with the media of educational communication: computers, telecommunications, audio and video recordings, film, and other audiovisual materials, as they pertain to teaching and learning; and
- The operation and management of information services for education-related organizations within library and information science.

Single copies of ERIC Digests—short research summaries on relevant topics—are available free; additional copies are $1 for up to 10, and $2 for 10 or more. ERIC/IR staff will conduct database searches in their subject areas on a for-fee basis, with a turnaround time of 3 to 5 working days. The cost for a full search (CD-ROM with up to 50 citations) is $25. Extra citations are 25 cents each. A full search/online (CD-ROM search supplemented by online search for most recent information) is $25 plus online charges. A short search (CD-ROM search with up to 10 citations) is $10.

Clearinghouse hours are Monday through Friday, 8:30 a.m. to 5:00 p.m. (EST). Summer hours are 8:00 a.m. to 4:30 p.m. Contact: ERIC Clearinghouse on Information Resources, Syracuse University, Huntington Hall, Room 030, Syracuse, NY 13244-2340, 315/443-3640 (phone), 315/443-5448 (FAX), eric@suvm.acs.syr.edu (Internet address).



ACCESS ERIC (ERIC/AE)

In August, the contract to operate ACCESS ERIC was awarded to Aspen Systems Corporation. Aspen managed ACCESS ERIC for the first three years of operation and will continue for another three-year term.

ACCESS ERIC staff members are: Beverly Swanson, Project Director; Belinda Taheri, Senior Information Specialist; Carol Boston, Dissemination Specialist; Laurie Gronlund and Matthew Soska, Information Specialists; and Silvia Goncalves, Reference Specialist.

ACCESS ERIC is the ERIC System Support Component responsible for coordinating ERIC's outreach, dissemination, and systemwide activities, developing new systemwide awareness publications, and providing reference and referral services through its nationwide toll-free number.

A Pocket Guide to ERIC, *All About ERIC*, *The ERIC Review*, the *ERIC Users' Interchange*, and the *Directory of ERIC Information Service Providers*, are some of the free materials produced and distributed by ACCESS ERIC. For-fee publications include *Striving for Excellence: The National Education Goals*, the *Catalog of ERIC Clearinghouse Publications*, the *Directory of Education-Related Information Centers*, and the *ERIC Calendar of Education-Related Conferences*.

Staff provide ERIC Database title and author searches for free, and referrals to ERIC Clearinghouses and/or Information Service Providers for subject searches. Hours of operation are 8:30 a.m. to 5:15 p.m. (EST). Contact information: ACCESS ERIC, 1600 Research Boulevard, Rockville, MD 20850-3172, 800/538-3742 (phone); 301/251-5767 (FAX); acceric@gwuvm.gwu.edu (Internet address).

NEW ERIC PUBLICATIONS AND PRODUCTS

The ERIC Clearinghouses and Support Components regularly develop new products and publications that guide users through the ERIC System or treat specific education issues. The *Interchange* is pleased to announce the following items:

From ACCESS ERIC

- *Conclusion Brochure Series*
  Free, 5-copy limit
  A collection of ten brochures that synthesize and summarize significant findings of recent education research on topics of interest to parents and educators. Available titles are:
  How Can I Be Involved in My Child's Education?
  How Can I Improve My Child's Reading?
  How Can Parents Model Good Listening Skills?
  How Can We Help Children Learn Geography?
  How Can We Help Children Learn to Be Responsible Citizens?
  How Do I Know If My Child's Teacher is Qualified?
  How Important is Homework?
  Should Gifted Students Be Grade-Advanced?
  What Do Parent's Need to Know About Children's Television Viewing?
  What Is a Quality Preschool Program?

- *1993 ERIC Calendar of Education-Related Conferences*
  $20.00, prepaid
  Anticipated publication date: December 1992
  This directory includes information on 450 international, national, regional, and state education-related conferences to help practitioners stay abreast of events scheduled during 1993. It features four indexes to allow users to identify conferences of interest quickly and easily:
  — Conference Date and Name Index
  — Sponsor and Conference Name Index
  — Geographic Index
  — Subject Index

These publications are available from ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3172, 1-800/LET-ERIC (873-3742). Check, money order, Visa, or MasterCard accepted. Purchase orders are accepted only from universities and state and local education agencies. Add $2 per item for shipping to Canada and $4 per item for shipping to other foreign countries.

From the U.S. Department of Education

- *Como ayudar a sus hijos a usar la biblioteca*
  Order No.: LP 92-4789
  Helping Your Child Use the Library
  This booklet offers ideas to help children, no matter what age, become good readers and to make the most of resources many libraries offer. It discusses library services available for preschoolers, school-aged children, and teenagers, as well as for children with special needs, including the gifted and talented, and those with physical and mental impairments.

Single copies of the Spanish version are available free from OERI, Dept. EIB, 555 New Jersey Avenue, NW, Washington, DC 20208-5641. Copies of the English version are 50 cents each from Department 415Y, Consumer Information Center, Pueblo, CO 81009.

From the ERIC Document Reproduction Service (EDRS)

- *Resources in Education Cumulative Indexes on Microfiche*
  $75
  The set of six cumulative indexes (1966-1991) to *Resources in Education* (RIE) is available on microfiche. The set is indexed by subject, author, title, institution/sponsor, ERIC descriptors, and ERIC identifiers. The resumes for all documents added to ERIC during 1991 also are included.

The collection is available from the ERIC Document Reproduction Service, 7420 Fullerton Road, Suite 110, Springfield, VA 22153-2852, 1-800/443-ERIC (3742).

The *ERIC Users' Interchange* is published biannually by ACCESS ERIC.

Editor .... Kristine D. Kaplan

Look for the next issue in March 1993.

ERIC

ERIC Clearinghouse on Information Resources

Syracuse University
School of Education • School of Information Studies
030 Huntington Hall
Syracuse, New York 13244-2340
(315) 443-3640

ERIC DIGEST

March 1992

EDO-IR-92-1

Trends in Educational Technology 1991

by Mary Alice Brennan

This digest is based on **Trends in Educational Technology 1991**, by Donald P. Ely.

A content analysis was performed to determine the trends in the field of educational technology for the period October 1, 1990 through September 30, 1991. Sources for the analysis included five leading professional journals in educational technology; papers given at annual conventions of three professional associations; dissertations from five universities that have a high level of doctoral productivity; and the educational technology documents that have been entered into the ERIC database. The analysis was complemented by the examination of supplementary documents to confirm the trends indicated in the content analysis.

This digest features selected trends identified in the study. For a full discussion of the study methodology and findings, the reader is referred to the source noted above.

TREND: The creation of technology-based teaching/learning products is based largely upon instructional design and development principles.

Over 15% of the teaching/learning materials reviewed in this year's study were concerned with design and development. Several subheadings related to design and development include message design, product development, individual differences, and course development. Needs assessment and task analysis were less conspicuous, and models and theories in support of specific design and development approaches are prominent in the literature. Appearing with increased frequency is the term "constructivism": that idea that the learner, rather than the teacher, develops (or "constructs") knowledge. Arguments for and against the concept have been presented in the literature. Finally, it is evident that research on screen design is influencing the development of teaching/learning products using computers.

TREND: Evaluation has taken on greater importance as the concept of performance technology has been further developed.

The descriptor "performance technology" is being used more frequently, especially in the business-industry-government context, to refer to effective instructional design and delivery. Performance technology is based on the conviction that there are training procedures that can guarantee learning, i.e., "performance," and that there are data, derived from careful evaluation, that demonstrate the effectiveness of a given design. Integral to this concept is process evaluation. Another aspect of evaluation in the 1991 literature is product evaluation, which is the assessment of instructional materials that may have potential uses in other settings. Although evaluation has typically been seen as peripheral to the educational technology field, it is now becoming integral to the instructional design process, and, as such, an essential element in the field.

TREND: Distance education is evident at almost every educational level in almost every sector.

It has been recently estimated that 25%-50% of the nation's students are reached by distance learning technology ("Technology," 1991). Over 1,500 school districts in 47 states are participating in distance education through the following technologies: satellite, audiographics, microwave, coaxial cable, computer, and fiber optics (Garnette & Withrow, 1990). Many distance education programs offer complete courses with the teacher in a remote location, although some students use this approach to supplement classroom instruction. The delivery of instruction is generally via telecommunications and computer hardware and software, and learners work both independently and in small groups. State policies regarding distance education are evolving. For example, Iowa is investing $50 million in a statewide telecommunications infrastructure. Other state programs of note are in Kentucky, Oklahoma, Michigan, Minnesota, Texas and Virginia. It has been observed that there is probably no other single trend that encompasses the theory and practice of educational technology better than distance education.

TREND: Computers are pervasive in the schools. Virtually every school in the U.S. has microcomputers.

In its annual survey of the numbers of computers in schools, Quality Education Data this year reported results from 83,283 elementary and secondary public schools in the United States. Microcomputer density (the number of students per computer) was 20:1 in 1990-1991, a reduction from 125:1 in 1983-1984. In fact, the percentage of U.S. schools with microcomputers has increased over the past 10 years until it reached 98% in 1990-1991 (Quality Education Data, 1991). A report from the United States Department of Commerce, Bureau of the Census reported that among children 3-17 years of age, 46% used a computer at home and/or at school, a rise from 30% in 1982 (Kominski, 1991). Sheingold and Hadley (1990) observed that computer software has been integrated into classroom practice in the following manner: (1) text processing tools (95%); (2) instructional software (89%); (3) analytic and information tools (87%); (4) programming and operating systems (84%); (5) games and simulations (81%); and (6) graphics and operating tools (81%). It is noted that one of the next steps in determining the role of the computer in education will be to examine the use of computers in teaching and learning in terms of social, vocational, pedagogic, and catalytic rationales.

TREND: Telecommunications is the link that is connecting education to the world.

Telecommunications, the technology of communication by electronic transmission, is being used to establish new connections between educators and students. The term "interactive" is commonly found in relation to telecommunications. Distance education applications, as discussed above, use such interactive telecommunications technologies as electronic mail, computer conferences, and two-way audio and video conferences. Networking is the dominant trend within telecommunications; in 1991, Congress passed the High-Performance Computing Act, which authorizes the creation of the National Research and Education Network (NREN), America's "information superhighway." The educational use of television, through cable, satellite, or videotape, reached new heights in 1991. The most popular classroom use of television was for current affairs programs, followed by literature, performing arts, and history. Access to cable programs was increased through the national Cable in the Classroom project. States are becoming the organizing units for delivery of telecommunications technology. For example, the Massachusetts Corporation for Educational Telecommunications (CET) operates the Mass LearnPike, and the Kentucky Educational Network links all public schools through satellite.

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This digest was prepared for the ERIC Clearinghouse on Information Resources by Mary Alice Brennan, School of Information Studies, Syracuse University. March 1992.

ERIC Digests are in the public domain and may be freely reproduced and disseminated.

To order the complete version of *Trends in Educational Technology 1991*, send $9.50 ($7.50 plus $2.00 shipping and handling) to:

Information Resources Publications
030 Huntington Hall
Syracuse University
Syracuse, New York 13244-2340
(315) 443-3640

Send order to:

Name ____________________
Address ____________________
____
City ____________________ State __________
Zip ____________________

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ERIC® USERS' INTERCHANGE

March 1993

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SPECIAL INTEREST NEWS FOR *INTERCHANGE* READERS

ERIC Clearinghouse Competition Concludes

The U.S. Department of Education's ERIC Program conducted a recompetition to award five-year contracts for the 16 ERIC Clearinghouses. The Request for Proposals required that, in addition to traditional services, the new Clearinghouse contracts offer a toll-free number, identify and include a select group of books within their subject scopes in the ERIC database, increase their use of technology, and expand networking/collaborative projects with the other components in the ERIC System.

The names of five Clearinghouses will change to more accurately reflect Clearinghouse scopes and current terminology when the new contracts are awarded: *Counseling and Personnel Services* will become *Counseling and Student Services*; *Handicapped and Gifted Children* will become *Disabilities and Gifted Education*; *Junior Colleges* will become *Community Colleges*, *Teacher Education* will become *Teaching and Teacher Education*; and *Tests, Measurement, and Evaluation* will become *Assessment and Evaluation*.

The proposals were due January 29, 1993, and the contracts should be awarded by the end of May 1993. The September 1993 *Interchange* will announce the Clearinghouse contractors chosen for the next five years along with a complete list of addresses, phone numbers, and user services contacts for each.

Internet Enables Colleagues to Communicate Through "Listservs"

Interchange readers (or student and faculty clients of readers) might be interested in subscribing to some of the Internet "listservs" devoted to education. Listservs are electronic discussion groups operated on the Internet. They make it possible for participants to discuss topics of professional or personal interest with others who share their interests. Participants pose questions to the group, and the resulting interchange

See LISTSERVS, Page 2

The *ERIC Users' Interchange* was prepared by ACCESS ERIC, a project of Aspen Systems Corporation under contract #RR92024001 for the Office of Educational Research and Improvement, U.S. Department of Education. Contractors undertaking such projects under government sponsorship are encouraged to express their judgment in professional and technical matters. Points of view or opinions do not necessarily represent official Department of Education positions or policies. All questions, correspondence, and contributions should be directed to the Editor of the *Interchange*, ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850-3172, 1-800-LET-ERIC (538-3742).

LISTSERVS, from Page 1

can be fascinating. Staff at the ERIC Clearinghouse on Rural Education and Small Schools, for instance, participate in several listservs related to education. One of the best, in their opinion, is EDPOLYAN. Discussions concern education policy and administration, and recent topics have included equity, school funding, and school and district size. The list is approximately three years old and has about 500 subscribers. Active participants include scholars, teachers, administrators, and students (including high school students).

To subscribe, simply send an Internet message to LISTSERV@ASUACAD.BITNET. The text of the message should consist of just the words "SUBSCRIBE EDPOLYAN" followed by your first and last name. The listserv operator will send information about EDPOLYAN—its purposes, features, and procedures—directly to your Internet mailbox. You will start to receive substantive messages from other participants almost immediately.

Approximately 3,000 listservs exist, and they cover a wide range of topics. There are more than 40 listservs relating to libraries. For example, LM_NET is a discussion group open to all persons interested in the library media field, and PACS-L is a group open to those interested in library technology or a variety of other library topics. PACS-L subscribers periodically receive a mailing entitled "Library-Oriented Computer Conferences and Electronic Serials." To retrieve a complete catalog of listservs, send a message to any listserv (e.g., LISTSERV@ASUACAD.BITNET). The message should read: "LIST GLOBAL." Within minutes, you'll receive the item.

Participation in listservs puts you in touch with colleagues who share your interests and commitments—around the nation and in other countries. One caution, however: subscribing to many listservs means that you will have a lot of mail to read. It is best to subscribe to a few that seem interesting. If they turn out not to be what you expected, send the message "UNSUBSCRIBE" followed by the list name directly to the listserv address (e.g., LISTSERV@ASUACAD.BITNET) and **not** to the list itself (e.g., EDPOLYAN@ASUACAD.BITNET).

Free National Education Goals Packets Available

ACCESS ERIC still has copies available of **free** National Education Goals packets that provide information about resource organizations and ERIC publications related to each of the goal areas: school readiness, school completion, student achievement and citizenship, math and science education, adult literacy and lifelong learning, and safe, disciplined, and drug-free schools. To order, call ACCESS ERIC at 1-800-LET-ERIC. Bulk quantities are available.

EDRS Announces Price Changes

Effective January 1, 1993, prices changed for most ERIC products available through the ERIC Document Reproduction Service (EDRS). Prices for ERIC Clearinghouse collections remained at the 1992 rate of $ .28 per microfiche card. Price changes for other EDRS products are as follows:

	1992 Rate	1993 Rate
Monthly Subscriptions (per microfiche card)	$ .109	$ .110
Back Collections (per microfiche card)	.138	.141
On-demand Microfiche (per title, up to 5 fiche)	1.161	1.183
On-demand Paper Copies (per 25-page increment)	3.20	3.30

Prices do not include shipping and handling and are valid from January 1, 1993 through December 31, 1993. If you have any questions regarding the price increases, contact EDRS at 1-800-443-ERIC (3742).

New *Interchange* Editor

Belinda Taheri has taken over as editor of the *ERIC Users' Interchange*. Ms. Taheri holds an MLS from the College of Library and Information Services of the University of Maryland at College Park. She is the User Services Coordinator for ACCESS ERIC and has been with the project since it began in May 1989.

"AskERIC" Internet Pilot Program

In November 1992, the ERIC Clearinghouse on Information Resources (ERIC/IR) began operating AskERIC, a prototype Internet-based electronic question-answering, help, and referral service. AskERIC is intended to provide insight into the nature and extent of the information needs of K–12 educators and an alternative approach for providing user assistance over the Internet. Conclusions drawn from the project will help determine future directions for the ERIC System in meeting national education information needs.

While it is primarily targeted to teachers, media specialists, and administrators, anyone involved with K–12 education who has questions about learning, teaching, information technology, or educational administration can "AskERIC." Drawing on the extensive resources of the ERIC System, AskERIC will respond via the Internet with an answer within 48 working hours. ERIC Clearinghouses are asked to provide information in their specialty areas to AskERIC users when needed.

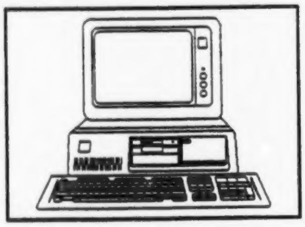
AskERIC began its service with three selected state networks—NYSERNET (New York State), TENET (Texas), and SEND-IT (North Dakota). It is now responding to requests from anyone who would like to pose questions and is currently upgrading the services it provides users.

ERIC/IR has developed AskERIC FTP and Gopher sites, enabling users to access selected ERIC Digests and help sheets, as well as a database of common questions and answers. Directories include: Q&A–frequently asked questions and answers; Mini-Searches–ERIC SilverPlatter searches on selected topics; Digests-HelpSheets–selected ERIC Digests and help sheets; and LM_NET–archives of the LM-NET listserv. To access these directories: use anonymous FTP to ericir.syr.edu in the pub directory or Gopher to ericir.syr.edu, Port #70.

ACCESS ERIC Bulletin Board Now Available on America Online

On December 7, 1992 an ERIC information bulletin board operated by ACCESS ERIC became available on America Online. The bulletin board is included in the Teachers' Information Network–Resource Pavilion section of the Learning and Reference file. It includes general information about ERIC, full-text of several Conclusion Brochures, a message center for dialogue between interested users and ACCESS ERIC staff, and a library of selected systemwide publications —including the full-text of *A Pocket Guide to ERIC*, *Internet Access Points to ERIC*, and several lead articles from past issues of *The ERIC Review*, to name a few. The library files are available in ASCII text for users who would like to download them and make personal copies. All materials in the library are considered to be in the public domain.

Currently, the discussion groups on the message center concern possible topics for *The ERIC Review*, state teacher education initiatives, and access to ERIC from a home computer. America Online subscribers and ACCESS ERIC staff post new message board topics periodically. In the future, ACCESS ERIC plans to answer user questions about specific education topics and provide reference and referral information.



Staff regularly upload new information to the bulletin board as new products become available and in response to user requests for information. If you're an America Online user, browse our board and let us know what you think. We're always looking for new suggestions!

Data Collection for 1993 *Directory of ERIC Information Service Providers* To Begin in April

It's time once again to update the *Directory of ERIC Information Service Providers*. The *Directory* lists more than 1,000 agencies and organizations (including addresses, telephone, numbers, and services) that provide computerized searches of the ERIC database, have a sizable collection of ERIC microfiche, and/or subscribe to and collect ERIC publications. Let your community know what you have to offer!

Interchange subscribers who were included in the last edition will automatically receive an entry verification/update form in April. Those of you who were not listed previously and would like to be included in the next edition should call ACCESS ERIC for a data collection form at 1–800–LET–ERIC.

ERIC COMPONENT SPOTLIGHT

In this issue we spotlight the ERIC Processing and Reference Facility.

The ERIC Processing and Reference Facility is the central editorial and computer processing agency that coordinates document processing and database-building activities for ERIC. It also performs acquisition, lexicographic, and reference functions, and maintains systemwide quality control standards.

In this regard, it prepares the biannual *ERIC Network Directory*, the annual *Resources in Education* (*RIE*) Master Schedule (for Clearinghouse shipments, tapes to EDRS and the Government Printing Office, etc.), the annual *ERIC Acquisitions Arrangements* (*EAA*) list, and the *Acquisitions Data Report* (*ADR*) duplicate-checking tool for in-process material systemwide. It also supplies to Clearinghouses a variety of ERIC processing forms and labels. Perhaps most important of all, it maintains the *ERIC Processing Manual* (*EPM*), the "bible" of ERIC processing operations.

The Facility's main product is the monthly *Resources in Education* (*RIE*) abstract journal; in addition, it produces the *Thesaurus of ERIC Descriptors*, the *Identifier Authority List* (*IAL*), the *ERIC Clearinghouse Publications* annual bibliography, and the "ERIC Ready Reference" series of one-page handouts for users. The Facility is a good place to turn with any question pertaining to the ERIC database. Online and CD-ROM vendors and other subscribers obtain the ERIC database from the Facility.

The Facility is located at 1301 Piccard Drive, Suite 300, Rockville, MD 20985–4305; phone: 301–258–5500; FAX: 301–948–3695; Internet address: ericfac@gwuvm.gwu.edu. Hours of operation are 8:00 a.m. to 5:00 p.m., Monday through Friday (EST).

VENDOR NEWS

From BRS:

For information on BRS products and services, call 1–800–289–4277.

From DataStar

The European online vendor DataStar (owned by Radio-Suisse) worked with the ERIC Processing and Reference Facility during 1992 to mount the ERIC database on its online service in November. DataStar now takes its place next to DIALOG, BRS, and OCLC as one of the four major online services offering access to ERIC.

For more information, contact DataStar/Radio Suisse Services at Plaza Suite, 114 Jermyn Street, London SW1Y 6HJ; telephone: +44 71 930 5503; FAX: +44 71 930 2581.

From DIALOG:

For information on DIALOG products and services, call 1–800–334–2564.

From OCLC:

- According to *OCLC Reference News* (November/ December 1992), OCLC is offering "Subscription Pricing for FirstSearch" which enables libraries to pay an annual fee for unlimited searching of selected databases. Each database has an annual fee for unlimited searching, and additional access is priced on a per-simultaneous, logged-on basis. Some advantages OCLC lists for this pricing arrangement are predictability of online searching charges; and fewer administrative tasks than with per-search pricing. Subscription pricing does not include telecommunication charges.

For more information about these or other OCLC products and services, call 1–800–848–5878.

From SilverPlatter:

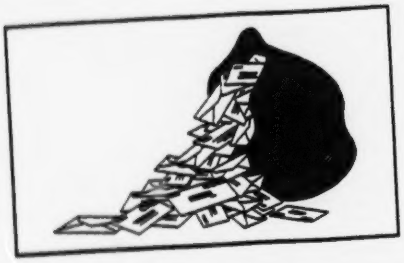
- SilverPlatter Information has added the full text of ERIC Digest records to the ERIC database. ERIC Digests are one- to two-page full-text research syntheses targeted to teachers, administrators, and other practitioners. They provide an overview of information on a given topic and references to more detailed items. Digest records are currently in the database, but without the full text of the actual documents. Look for the full text of more than 850 Digests to be available in March 1993.

For more information on this or other SilverPlatter products, call 1–800–521–0574 or 703–527–4780.

Call 1–800–LET–ERIC

Ask ERIC

Letters to the Editor



Do you have questions about the ERIC System or database? Take them straight to the source. Ask ERIC! Send questions to the *Interchange* Editor, c/o ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850–3172. This issue's "Ask ERIC" questions relate to the ERIC database.

Q ***What is the difference between ED and EJ numbers on an ERIC database printout? How long is each type of record on average?***

A The ERIC database consists of two files: Resources in Education (*RIE*) and *Current Index to Journals in Education* (*CIJE*). The ED records announced in *RIE* represent documents; they are approximately 1,800 characters long on average. The EJ records announced in *CIJE* represent journal articles; they are approximately 650 characters long on average. Overall, the ERIC database through 1992 is approximately 908 million bytes in size and growing at a rate of around 35 million bytes per year.

Q ***How many documents and journal articles are added to the ERIC database each year? What is the total number of records in the database?***

A

FILE	NUMBER OF RECORDS		
	1966-1991	1992	TOTAL
Resources in Education (*RIE*), 1966-	328,394	13,025	341,419
Current Index to Journals in Education (*CIJE*), 1969-	430,750	18,792	449,542
TOTAL	759,144	31,817	790,961

NEW ERIC PUBLICATIONS AND PRODUCTS

The ERIC Clearinghouses and Support Components regularly develop new products and publications that guide users through the ERIC System or treat specific education issues. *The Interchange* is pleased to announce the following items:

From ACCESS ERIC

☞*1993 ERIC Calendar of Education-Related Conferences*
$20.00, prepaid
Publication date: December 1992
This directory includes information on 450 international, national, state, regional, and local education-related conferences. Designed to help practitioners stay abreast of events scheduled during 1993, it features four indexes that allow users to identify conferences of interest quickly and easily:

- — Conference Date and Name Index
- — Sponsor and Conference Name Index
- — Geographic Index
- — Subject Index

☞1993 *Catalog of ERIC Clearinghouse Publications*
$10.00, prepaid
Publication date: March 1993
This catalog lists more than 1,300 books, topical bibliographies, information analyses, ERIC Digests, and other products produced by the ERIC System. Many of these titles are available free or at very low cost. The *Catalog* includes ordering information and a comprehensive subject index.

These publications are available from ACCESS ERIC, 1600 Research Boulevard, 3C, Rockville, MD 20850–3172, 1–800–LET–ERIC (538–3742). Check, money order, Visa, or MasterCard accepted. Purchase orders are accepted only from universities and state and local agencies. Add $2.00 per item for shipping to Canada and $4.00 per item for shipping to other foreign countries.

Call 1–800–LET–ERIC

From the ERIC Clearinghouse on Teacher Education (ERIC/SP)

☛*Who's Missing from the Classroom?: The Need for Minority Teachers*
$14.50, including shipping and handling
This book examines issues surrounding the absence of teachers of color in the teaching ranks and offers solutions and strategies from the nationwide teleconference of the same name held in 1991. Videos of the full 2 ½-hour teleconference are available for $100.

This publication is available from ERIC/SP, One Dupont Circle, NW, Suite 610, Washington, DC 20036–1186, 202–293–2450.

From the ERIC Clearinghouse for Junior Colleges

☛*Maintaining Faculty Competence*
Order No.: 79; $15.95
In light of the impending retirement of a significant proportion of today's community college faculty, and in response to widespread faculty burnout, this *New Directions for Community Colleges* volume addresses both new faculty recruitment and training and renewal of current faculty. It covers community college administrators and faculty, four-year college faculty involved in community college education, and education consultants.

Single issues of the *New Directions* series are available from Jossey-Bass, Inc., Publishers, 350 Sansome Street, San Francisco, CA 94104–9825. Back issues, annual subscriptions, and bulk order discounts are also available.

From the ERIC Clearinghouse on Reading and Communication Skills

☛*Bridging: Fostering Metaphorical Thinking*
$14.50, includes postage and handling
This is a practical how-to book for teaching students to be thoughtful and inventive with language and meaning. It helps teachers show students how to think analogically, to assess metaphors critically for their hidden cultural weight, and to use metaphors in a self-enabling way.

This book is available from the ERIC Clearinghouse on Reading and Communication Skills, Indiana University, Smith Research Center, Suite 150, Bloomington, IN 47408–2698, 812–855–5847.

From the ERIC Clearinghouse on Rural Education and Small Schools (ERIC/CRESS)

☛*Native Education Directory: Resources for American Indians, Alaska Natives, and Native Hawaiians*
$12
This directory is an updated, expanded replacement for *American Indian Education: A Directory of Organizations and Activities in American Indian Education.* It includes information about U.S. government offices, state offices, associations, organizations, clearinghouses, centers, Congressional committees, periodicals, and college and university programs. Contact information and program descriptions are included for more than 400 entries. The *Directory* is indexed by organization name and state.

This publication is available from ERIC/CRESS, P.O. Box 1348, Charleston, WV 25325, 1–800–624–9120.

From the ERIC Document Reproduction Service (EDRS)

☛*Restructuring America's Schools: A Blueprint for Action*
$195 annual subscription
This is a microfiche collection of all documents on restructuring added to ERIC since 1988, including exemplary programs, case studies, and guidelines for facilitating change at the local level. It offers "hands-on" assistance to education practitioners in their quest to better serve students.

The full subscription package includes the base collection of more than 150 documents, quarterly updates of new documents, a microfiche storage box, and a hard-copy index. For more information, contact EDRS, 7420 Fullerton Road, Suite 110, Springfield, VA 22153–2852, 1–800–443–ERIC.

The *ERIC Users' Interchange* is published biannually by ACCESS ERIC.

Editor . . . . Belinda J. Taheri

Special thanks to Ted Brandhorst and Carol Boston for their assistance.

Look for the next issue in September 1993.

ERIC

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ERIC DIGEST

EDO-IR-92-6

September 1992

Access Points to ERIC: Update 1992

By Nancy R. Preston

Now in its second quarter-century, ERIC (the Educational Resources Information Center) has evolved from a research database into a multi-faceted information system serving teachers, administrators, researchers, parents, students, and others interested in education. At the heart of ERIC is the world's largest education database, providing coverage of journal articles and document literature from a wide range of public and private sources. The system also features a variety of products and services "above and beyond" the database, designed to put educational information into the hands of people who need it. ERIC's commitment to reaching diverse user audiences, coupled with the rapid advancement of information technologies, has resulted in a larger-than-ever selection of access points to ERIC.

Online Access Through Commercial Services

The original way to access the ERIC database by computer was through a telecommunications link to a commercial online database vendor. Today ERIC is available through two such vendors: **DIALOG Information Services and BRS Information Technologies**. These services offer the most powerful and sophisticated search capabilities, the ability to access the entire database (from 1966 to the latest month) at once, and the ability to execute complex search strategies. One must be trained in the vendor's search language to utilize the most powerful search capabilities, however, so this type of searching is usually performed by librarians and other professionals. Costs include a membership fee and charges based on the number of minutes connected to the service and the number of citations downloaded.

For home users, both DIALOG and BRS offer special services such as evening and weekend rates and menu-driven searching. The vendors also offer classroom instruction programs, for students in elementary through graduate levels, with discounted rates and group services.

In addition to database vendors, several multi-purpose online information services exist for general consumers. One, CompuServe, offers access to the ERIC database through its IQuest search system. This system is designed for the novice, with menu-driven keyword searching and per-search pricing.

GTE Education Services is an online service especially for teachers and school administrators. Members have access to many information resources, including the latest three years of ERIC, through a menu-driven interface. Search fees are based on the number of minutes connected. GTE also offers access to ACCESS ERIC's *Reference and Referral Databases*, and the *ERIC Digests Online* file (see below).

OCLC, or the Online Computer Library Center, Inc., is an online bibliographic utility used by thousands of libraries around the world. Recently, OCLC began offering FirstSearch, an information service designed for direct use by library patrons. ERIC is one of many databases accessible through FirstSearch. Fees and access policies for this service are determined by the host library.

CD-ROM

In 1986, ERIC became the first major bibliographic database marketed on CD-ROM, and this product has been extremely popular ever since. CD-ROM (compact disk, read-only memory) technology allows vast quantities of data to be stored on compact disks, which are searchable at self-contained personal computer stations. Two vendors, **SilverPlatter Information and DIALOG Information Services**, currently produce ERIC on CD-ROM for both IBM and Macintosh platforms. The systems are designed to be used with little instruction, yet they retain many of the powerful search features of online systems. Both ERIC CD-ROM products are updated quarterly and sold on a set-fee subscription basis, which makes them a cost-effective option for libraries that offer open access. While in the past CD-ROM systems were limited to single users, advances in networking technology now allow multiple users to access a single CD-ROM database simultaneously.

Locally-Mounted Systems and Internet Access

An increasing number of institutions, especially universities and state university systems, are mounting ERIC data on their own mainframes for use by their clientele. The host institutions bear the cost of maintaining the database, select the search software, and determine their own access policies. In some cases the ERIC database is linked to the library's online public access catalog, or OPAC, and searched with the same interface. In other cases it is part of a campus information system that uses information retrieval software obtained from BRS or the SPIRES Consortium.

Recently there has been a trend toward Internet access to OPACs, campus information systems, and other electronic resources, including locally-mounted ERIC. Often, remote access to these systems is limited to registered users. But some institutions do offer open Internet access to all or part of the ERIC database. Current information about all Internet-accessible ERIC resources is available from **the ERIC Clearinghouse on Information Resources**. ERIC data tapes are sold by the **ERIC Processing and Reference Facility.**

Old But Still Good: Print Access

Manual searching of printed indexes, once the only way to access the ERIC database, is still a viable option. Two monthly indexes announce the latest additions to the database: *Current Index to Journals in Education* (CIJE) for journal articles, and *Resources in Education* (RIE) for documents, the "fugitive literature" of education that is not commercially published. About 3,000 locations around the world subscribe to one or both of the indexes, which are also available at Federal depository libraries. There is also a microfiche version of the RIE index, which is issued annually and includes data from 1966 to the current year.

Print and microfiche indexes are relatively inexpensive options for the institution wishing to offer ERIC access. Advantages for the user are that no special training is needed and the database contents can easily be browsed. For information about subscribing to CIJE, contact the publisher, Oryx Press. RIE subscriptions are managed by the **Superintendent of Documents, U.S. Government Printing Office**. The microfiche index to ERIC documents is offered by the **ERIC Document Reproduction Service (EDRS)**.

Acquiring ERIC Articles and Documents

Users of ERIC can obtain copies of journal articles and documents through several sources. Articles cited in CIJE are not provided in full text by the ERIC system; users may find copies at public or university libraries or order copies from private reprint services. Most documents announced in RIE, however, can be read at the nearly 900 university libraries and research centers that hold the ERIC document microfiche collection. The **ERIC Document Reproduction Service (EDRS)**, which produces these microfiche collections, also fills individual orders for ERIC documents in microfiche or paper copy. Orders can be placed directly to EDRS by mail, telephone, or fax, or placed online during a DIALOG or OCLC search. In addition to standing mircofiche subscriptions, EDRS sells the entire ERIC collection of over 320,000 documents and subsets of RIE documents by year and by clearinghouse.

Above and Beyond the ERIC Database

In recent years, the ERIC system has placed increased emphasis on extending services beyond the well-known ERIC database. Clearinghouses and support components engage in many outreach activities to share the expertise gained through database building and partnership with important organizations in their fields. All Clearinghouses offer user services, including question-answering, advice in preparing ERIC searches, and workshops.

Another way they share their knowledge is through publications that synthesize information. The best known product is the *ERIC Digest* series—short reports summarizing "hot topics" in education. Other products include monographs, trends and issues analyses, bibliographies and prepared searches, curriculum support materials, and newsletters and brochures. For information on publications and services, contact the clearinghouse of interest. A list of all clearinghouses may be obtained from ACCESS ERIC (see below).

ERIC Digests Online, or EDO, is an online file of most ERIC Digests produced since 1988, in full text. As of the end of 1991, the file contained about 950 digests from all 16 ERIC clearinghouses. EDO can be accessed through a DIALOG online search. It is also available through GTE Education Services (described above), and at least one Internet-accessible electronic bulletin board system. For information about purchasing the *ERIC Digests Online* file, contact the **ERIC Processing and Reference Facility**. For information about Internet access, contact the **ERIC Clearinghouse on Information Resources**.

ACCESS ERIC, a recent addition to the ERIC family, serves as a gateway to the entire system. Through its toll-free number (1-800-LET-ERIC), ACCESS ERIC answers questions about using ERIC and refers callers to the appropriate Clearinghouses. It also serves as a central dissemination point for ERIC Clearinghouse products. ACCESS ERIC produces several reference and referral directories. These resources are sold in print form and can also be accessed online through **GTE Education Services** (see above). Titles include: *Directory of ERIC Information Service Providers*, *Directory of Education-Related Information Centers*, and *Calendar of Education-Related Conferences*.

Other products of ACCESS ERIC include the *Conclusion Brochure* series, information for parents on such topics as "How Do I Help My Child Say No to Drugs?" and "How Can We Help Children Learn Geography?"; the *ERIC Review*, a free journal focusing on one educational topic per issue; and the general ERIC brochures, *All About ERIC*, and *A Pocket Guide to ERIC*.

The Future

ERIC is a dynamic system, always changing in response to users' needs, trends in the field of education, and developing technologies. This digest provides a snapshot of ERIC today. In the future, look for ERIC services over the Internet, a full-text "Best of ERIC" product on CD-ROM, and electronic document delivery.

This digest was prepared by Nancy R. Preston, Assistant Director, ERIC Clearinghouse on Information Resources, Syracuse University, Syracuse, New York. September 1992.

ERIC Digests are in the public domain and may be freely reproduced and disseminated.

Sources

ACCESS ERIC
1600 Research Blvd.
Rockville, MD 20850-3172
1-800-LET-ERIC
ACCERIC@GWUVM.GWU.EDU

BRS Information Technologies
Maxwell Online, Inc.
8000 Westpark Dr.
McLean, VA 22102
For online services: 1-800-289-4277
(703) 442-0900
For mainframe software:
(703) 442-3870

CompuServe
5000 Arlington Centre Blvd.
Columbus, OH 43220
1-800-848-8990
(614) 457-8600

DIALOG Information Services, Inc.
3460 Hillview Ave.
Palo Alto, CA 94304-1396
1-800-3-DIALOG (1-800-334-2564)
(415) 858-3785

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Springfield, VA 22153-2852
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(301) 258-5500
ERICFAC@GWUVM.GWU.EDU

GTE Education Services
West Airfield Dr.
P.O. Box 619810
D/FW Airport, TX 75261-9810
1-800-927-3000

OCLC
6565 Frantz Road
Dublin, OH 43017-3395
1-800-848-5800

Oryx Press
4041 North Central Ave.
at Indian School
Suite 700
Phoenix, AZ 85012-3397
1-800-279-ORYX
(602) 265-2651

SilverPlatter Information, Inc.
100 Silver Ridge Drive
Norwood, MA 02062-5026
(617) 769-2599
800-343-0064

SPIRES Consortium
Polya Hall
Stanford University
Stanford, CA 94305
(415) 723-3743
CONSORTIUM@
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Superintendent of Documents
U.S. Government Printing Office
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(202) 783-3238

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ERIC NETWORKER

ERIC Clearinghouse on Information Resources • Syracuse University • Syracuse, New York 13244-2340
Phone: (315) 443-3640 • Fax: (315) 443-5448 • Internet: ERIC@SUVM.ACS.SYR.EDU

Number 4.0

November 1992

INTERNET ACCESS POINTS TO ERIC

The following systems currently provide unrestricted Internet access to ERIC resources. For general information about ERIC, contact ACCESS ERIC, 1-800-LET-ERIC or ACCERIC@GWUVM.GWU.EDU.

I. **Syracuse University** offers the latest five years of the ERIC database on the SUINFO system. Searchable fields include author, title, descriptor word, descriptor phrase, and abstract.

1. Telnet **acsnet.syr.edu** (or **128.230.1.21**)
2. At > prompt, type **SUINFO**.
3. At ENTER TERMINAL TYPE prompt, type **VT100**.
4. Bypass the USERID and PASSWORD prompts with the tab key.
5. At the COMMAND prompt, type **SUINFO**.
6. When prompted, type **Y** (yes) to continue.
7. Find ERIC through the menus (first type **1** for General Interest files, then the number corresponding to ERIC), or type **ERIC** to enter directly.
8. Follow screen instructions to search. (If function keys don't work, type in corresponding commands.)
9. To end the session, type **LOGOFF**.

   TIP: Whenever MORE or HOLDING appears in the lower right corner of the screen, hit the HOME or ENTER key to advance.

II. **Auburn University Libraries** offers the complete ERIC database, 1966 to the latest quarter. Searchable fields include title, author, subject heading (descriptor), and keyword. (Note: requires TN3270.)

1. TN3270 **auducacd.duc.auburn.edu** (or **131.204.2.13**).
2. At the opening screen, tab to APPLICATION, and enter **01**.
3. At the main menu, type **ERIC**.
4. Follow screen instructions to search.
5. To end the session, type **STOP**.

   TIP: The keyword search field allows use of Boolean operators, truncation, nesting, and other special search features. Type **EXP K** for a complete explanation.

III. The **University of Saskatchewan Library System** offers the ERIC database from 1983 to the present. Searchable fields include author, title, descriptor, identifier, publication year, ERIC accession number, and journal title.

1. Telnet **sklib.usask.ca** (or **128.233.1.20**)
2. At USERNAME prompt, enter **SONIA**.
3. At main menu, select **9**, "CIJE plus RIE: 1983 to Present."
4. Type **HELP** to see a summary of search and display commands, field prefixes, and Boolean operators. (Sample search statement to find documents with the descriptor television: **f d=television.**)
5. To end the session, type **Q** (quit).

TIP: Type **BEGINNER** to see a system tutorial.

IV. The **University of North Carolina, Chapel Hill**, through its **laUNChpad** system, hosts a searchable, full-text file of over 850 ERIC Digests. (ERIC Digests are short reports on current education topics written by each of the 16 ERIC Clearinghouses.)

1. Telnet **bbs.oit.unc.edu** (or **152.2.22.80**)
2. At the login prompt, type **LAUNCH**.
3. Enter your first and last name as directed. (Remember how you enter your name for future sessions.)
4. Enter a password of your choice (and remember it).
5. At the main menu, select **4**, "Topical Document Search (WAIS)."
6. Move through the list to ERIC Digests (138 or 139 as of this writing). Hit RETURN to select the file.
7. Type one or more keywords and hit RETURN to start the search. Results will be displayed by title in a ranked order based on occurrences of the keyword.
8. Highlight a title and hit RETURN to see the full text.
9. To end the WAIS session, type **Q** (quit). To exit laUNChpad, type Q again.

TIP: Type **?** to see a list of all commands.

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